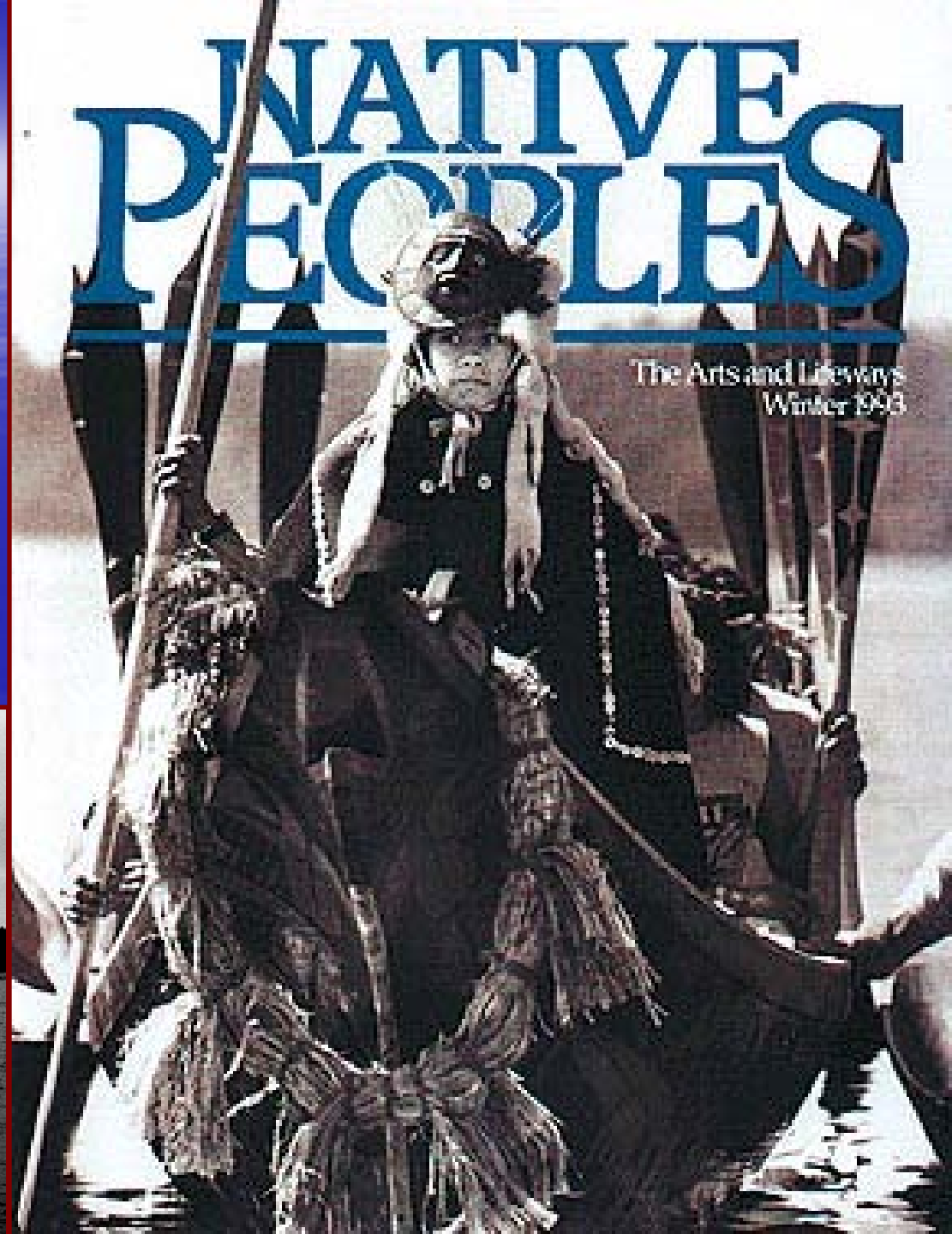
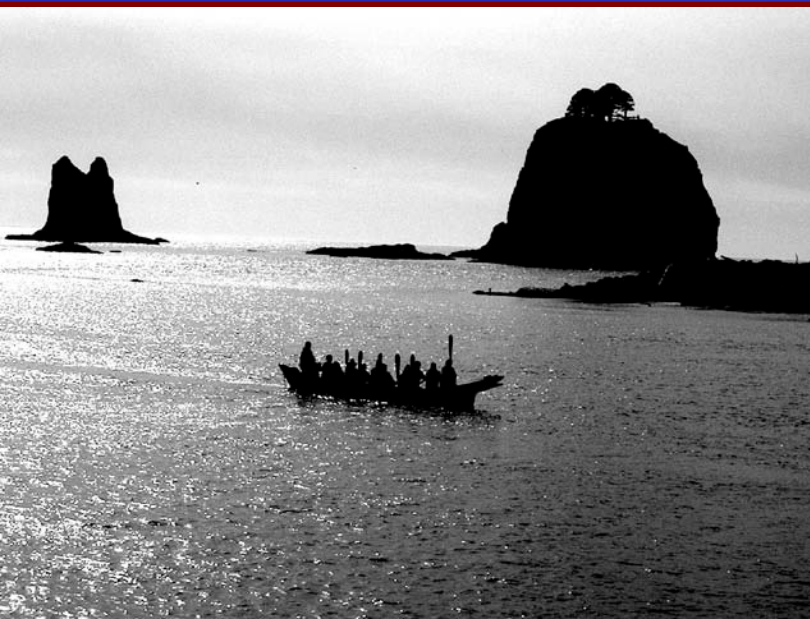


Port Gamble Bay Issues & Shoreline Development Concerns

Paul McCollum

Director, Natural Resources Dept.



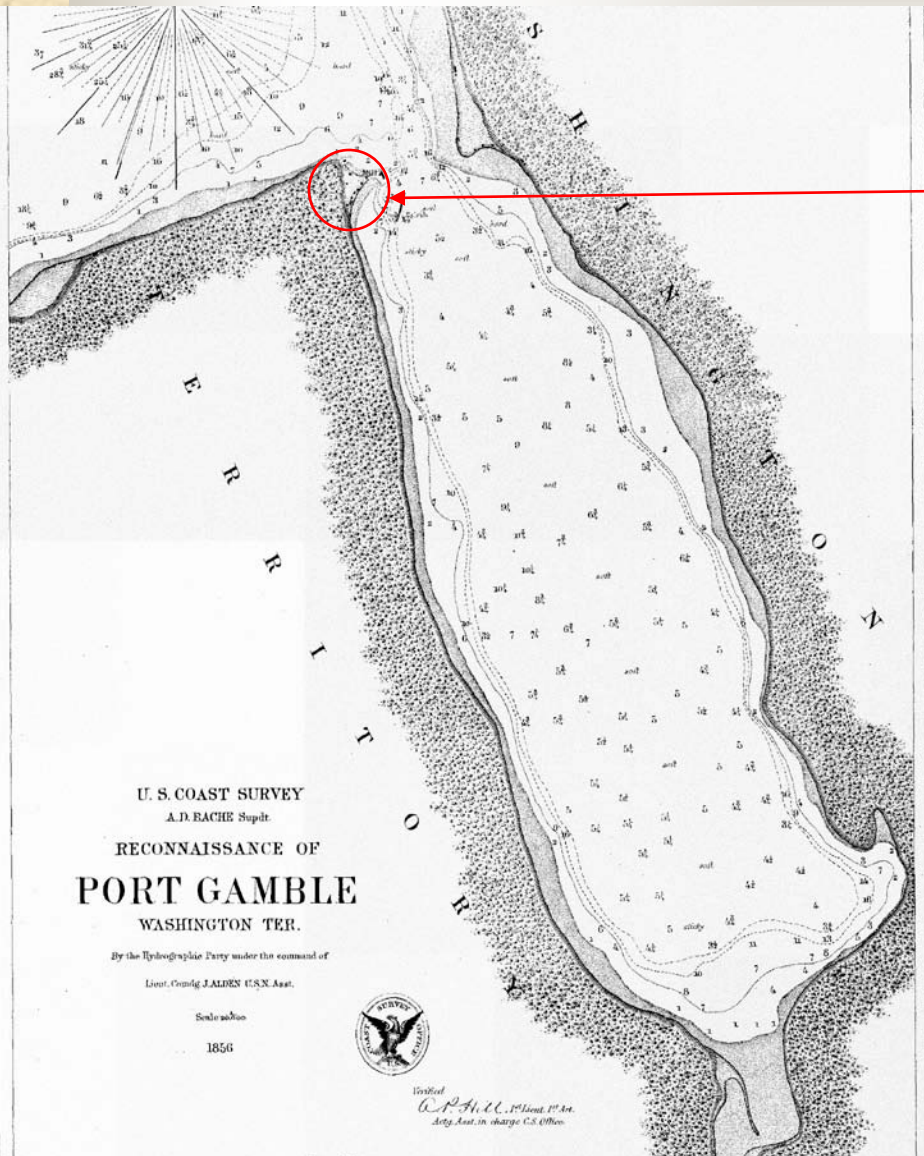


Securing the Tribe's Future in the Bay

■ Port Gamble Bay

- Orientation and Brief Historical Overview
- Cultural Resource Issues
- Natural Resource Impacts and Issues
- Port Gamble Townsite and Land Ownership
- Aerial Views and Perspectives
- The Proposed Marina “Dock”
- Shellfish Closure Zones and Other Impacts
- The MTCA Clean-up Process, Issues and Options
- Our Preferred Future for Port Gamble Bay

Pre-History and History of the Bay



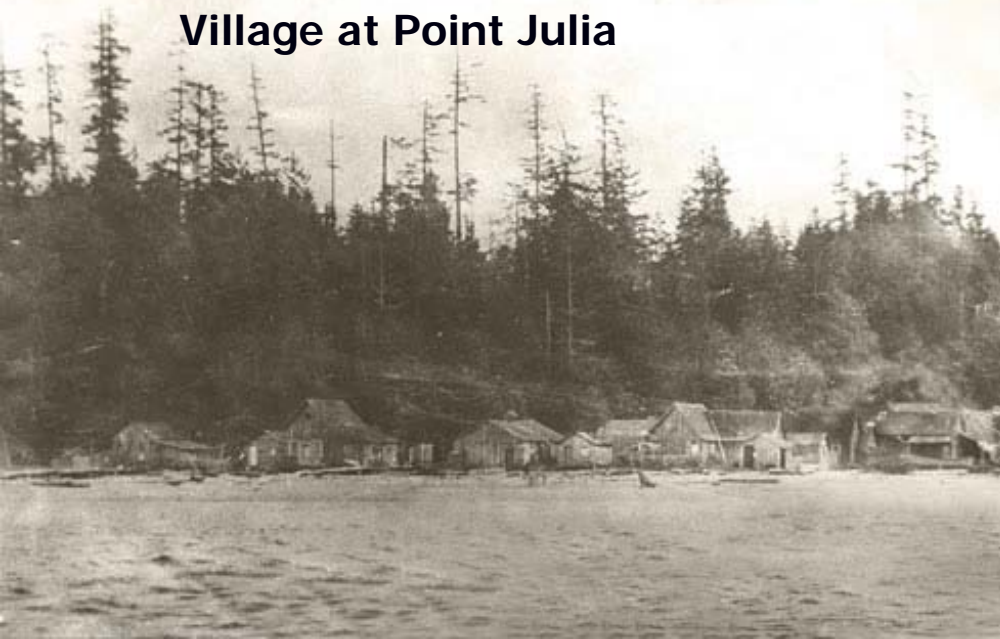
- **Precontact** Bay and its shores were occupied by the S'Klallam in historic and prehistoric times, PGST Village
- **1853** Josiah Keller (Pope & Talbot) sailed in to establish a mill, left because it was occupied by S'Klallam but returned
- **Valid Title?** Keller filed 3 Donation Land Claims. Mill & workers owned all by 1872.
 - spit at Teekalet Bluff
 - area now Port Gamble, mill site
 - area now Point Julia
- **Relocated to Point Julia**
- **Reservation Established**
 - IRA gov't purchase, 1938

"Teekalet" Hotel at Port Gamble 1903



1903

Village at Point Julia



Puget Mill Co. Ships at Port Gamble 1895

Cultural Resources at a Glance



- **Teekalet** *e.g.*, The spit downslope of us was the ancient cemetery... [When] the Port Gamble mill was 1st [sic] established, a whiteman gathered the bones of the cemetery, piled them and poured coal-oil on. Joe Tom's [mother] used to tell about this. That whiteman plowed part of the flat downslope of us here, planting spuds. (Harrington 1981)

* Based on 1942 interviews with Louise Butler (b. 1860), Emily Webster (b. 1883), and Cyrus Webster (b. 1890)

- **Point Julia** Listed sites
 - Two aboriginal shell middens
 - Lithic tool and scatter site

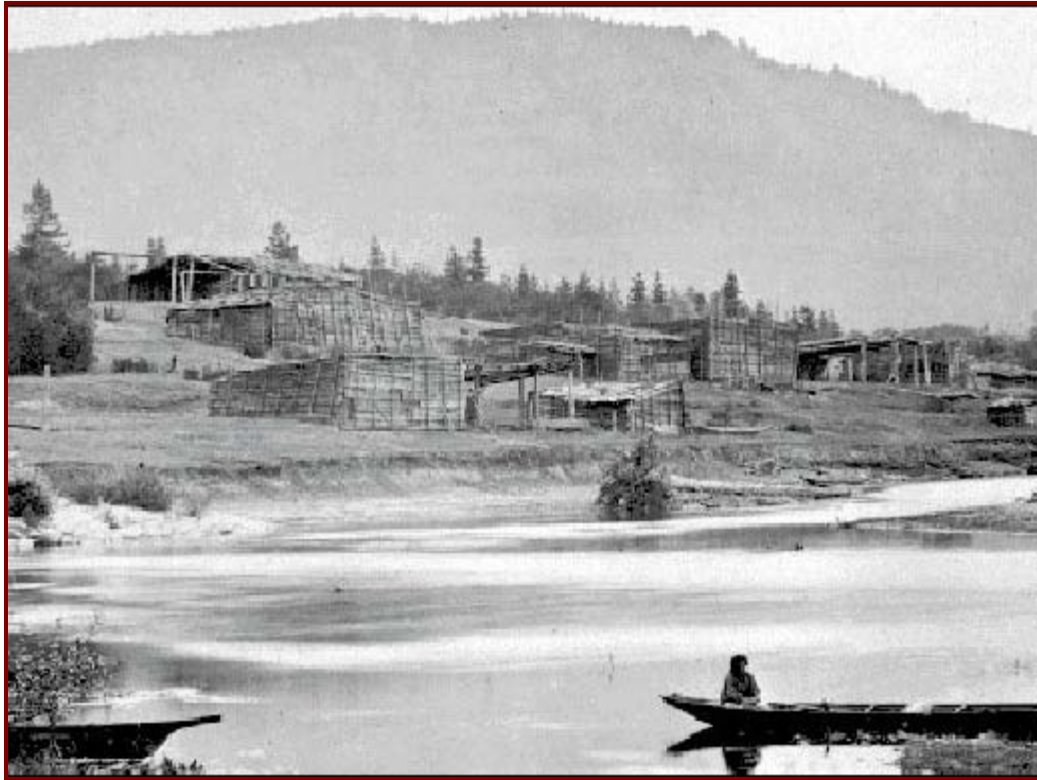
Current Archeology Efforts

- NWAA Hired by OPG on Our Behalf
 - Cultural Resource Evaluation
- Project w/ CWU, Tracy, Nikki & Destiny
 - Concept Drawings of Pre-Contact Teekalet Village
 - Series of Culturally Accurate Paintings
 - Review of Lost or Removed Artifacts and Recovery Options



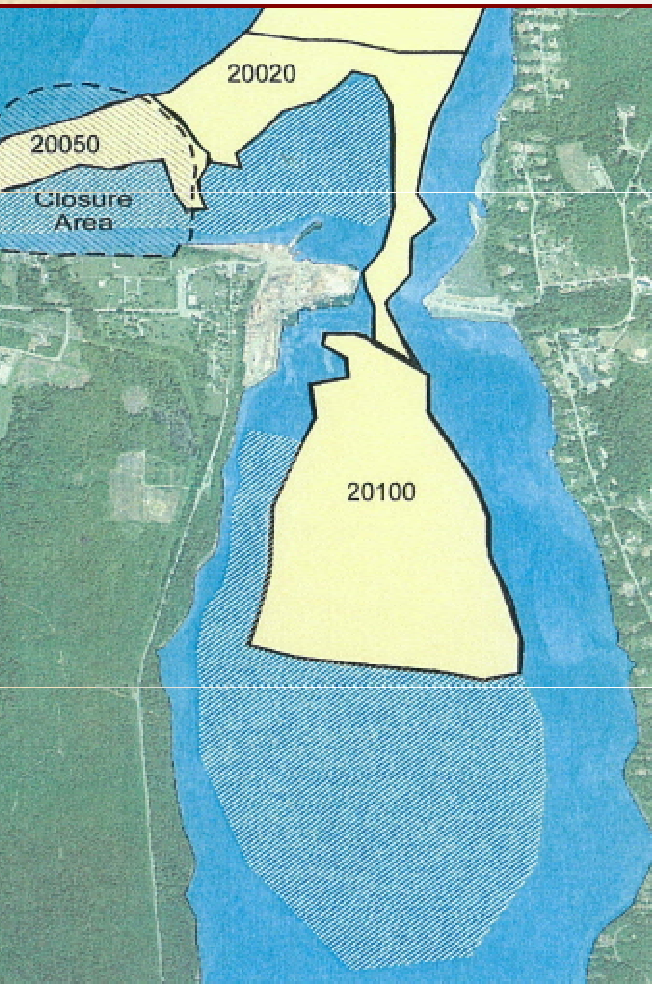


S'Klallam and Chemakum Indian tribes on Olympic Peninsula when Jarman settled there in 1848-52



- *This photos is of a Quamichan Indian Village on Vancouver Island, taken in 1875. Quamichan was northwest of Nanaimo on the Quall-e-hum River, where Dr. Robert Brown explored in 1864.*
-Pam Clise adds that the S'Klallam villages ranged as far as Port Gamble

Natural Resources - Shellfish



2003 through 2007 Shellfish Harvest for 12A

Species	Sub Area	Code	Number	units	Avg Annual
Geoduck	20000	505	293,598	lbs	73,400
Geoduck	20100	505	220,152	lbs	55,038
Total Geoduck			513,750		128,438
Manilla Clam	250510	509	28,807	lbs	7,202
Manilla Clam	250512	509	23,402	lbs	5,851
Total Manilla			52,209		13,052
Pacific Oyster	250510	523	20,337	dzn	5,084
Pacific Oyster	253005	523	7,455	dzn	1,864
Pacific Oyster	257010	523	29,091	dzn	7,273
Pacific Oyster	257011	523	129,993	dzn	32,498
Total Oyster			186,876		46,719
Dungeness Crab		561	326,436	lbs	81,609

Weston Solutions 2007 - Map 11

Tribe still relies heavily on Commercial, Ceremonial & Subsistence Harvest of Geoduck clams, Oysters, Littleneck clams, Butter clams, Manila clams, Crab, Shrimp. There are an estimated 4,418,000 lbs of geoducks in Port Gamble Inside Tract and Point Julia Tract.

ESA-listed Salmonids and Habitat

■ Threatened species

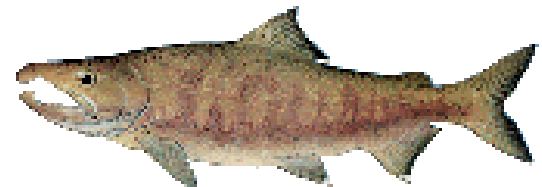
- Puget Sound Chinook salmon
- Hood Canal summer-run chum
- Puget Sound steelhead

■ Designated Critical Habitat (Juvenile Migration Corridors)

- Puget Sound Chinook Salmon
- Hood Canal summer-run chum

■ FEMA Jeopardy/Adverse Mod

- Entire mill site is FEMA floodprone A
- FEMA recommendation to Counties – moratorium on development until new standards



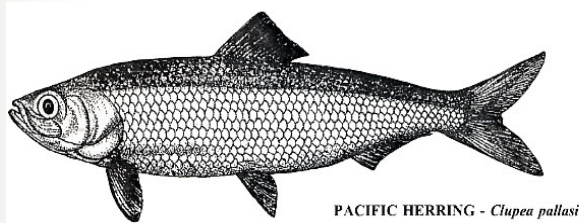
2003 through 2007 Salmon Harveys in 9A

Species	Code	Tickets	Landings	Number	num_lbs	Units	Avg Lbs/Year
Chinook	001	63	65	131	1,464	lbs	366
Chum	002	92	97	8,332	70,999	lbs	17,750
Coho	004	790	820	26,984	192,533	lbs	48,133

Herring






WDFW 2003



- Herring are vital components of the marine ecosystem and an important prey item for many species, esp. ESA-listed salmon
- Port Gamble herring stock is the 2nd largest remaining in Puget Sound
- Port Gamble Bay is the center of the stock's spawning activity
- Documented herring spawning beds exist along the entire shoreline (documented events plus macroalgae communities)

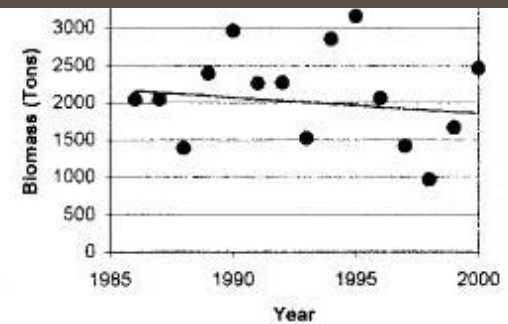
Eelgrass and Herring Surveys: *Port Gamble*

Eelgrass Distribution, 2001-2005

-  *Z. japonica*
-  Dense *Z. marina*
-  Sparse *Z. marina*

-  Present
-  Dive Survey

Port Gamble Herring
1986-2000



Port Gamble Townsite

- Self Sustaining Community?
- Museum Town?
- Retirement Community?
- Master Planned Resort?
- Williamsburg?
- Theme Park?
- Golf Course Community?
- The University of Port Gamble?
- Marine Industrial?



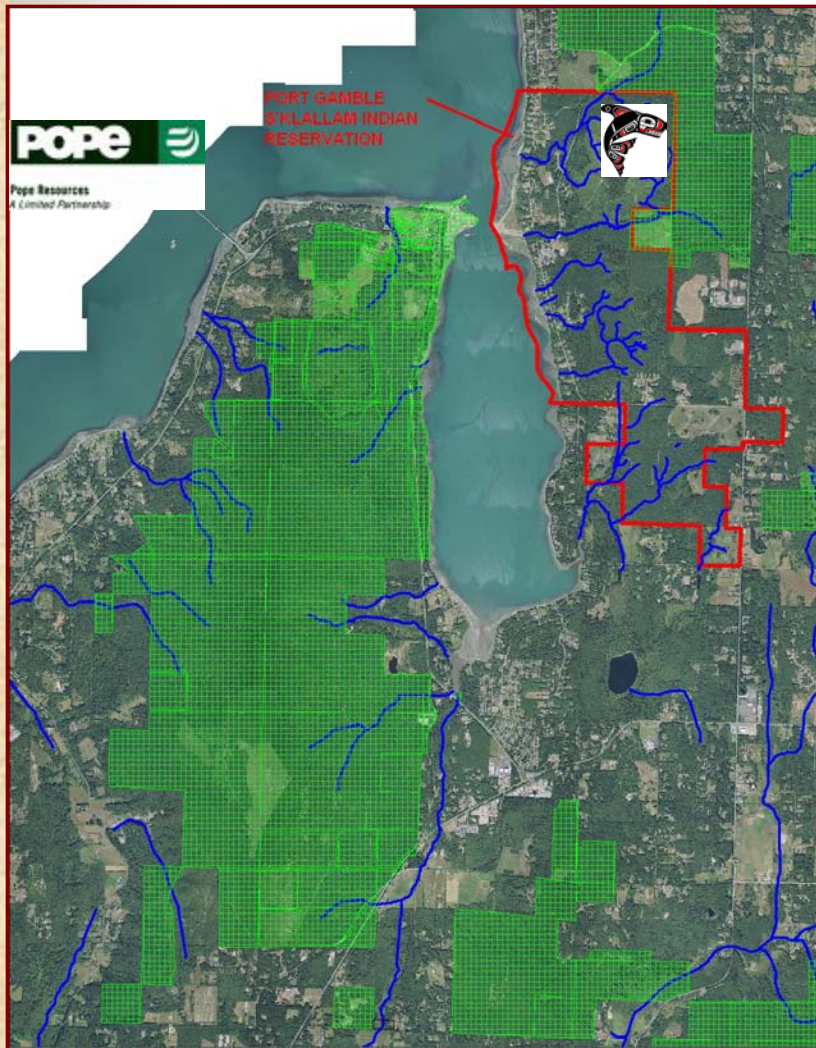
Neighbors – Then...

Port Gamble – the Companies

Point Julia – the Tribe



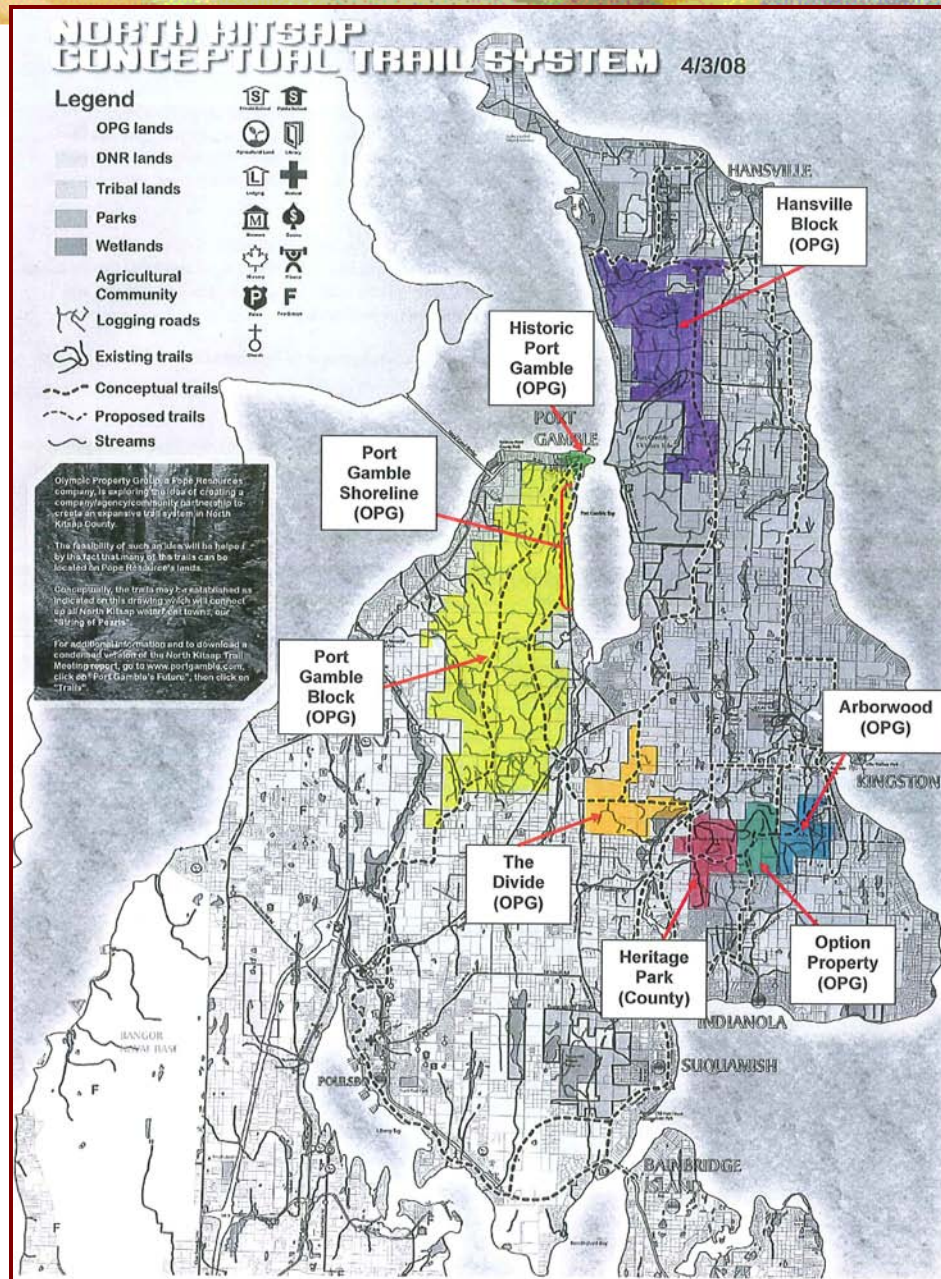
...and Now



So Close, Yet Worlds Apart.



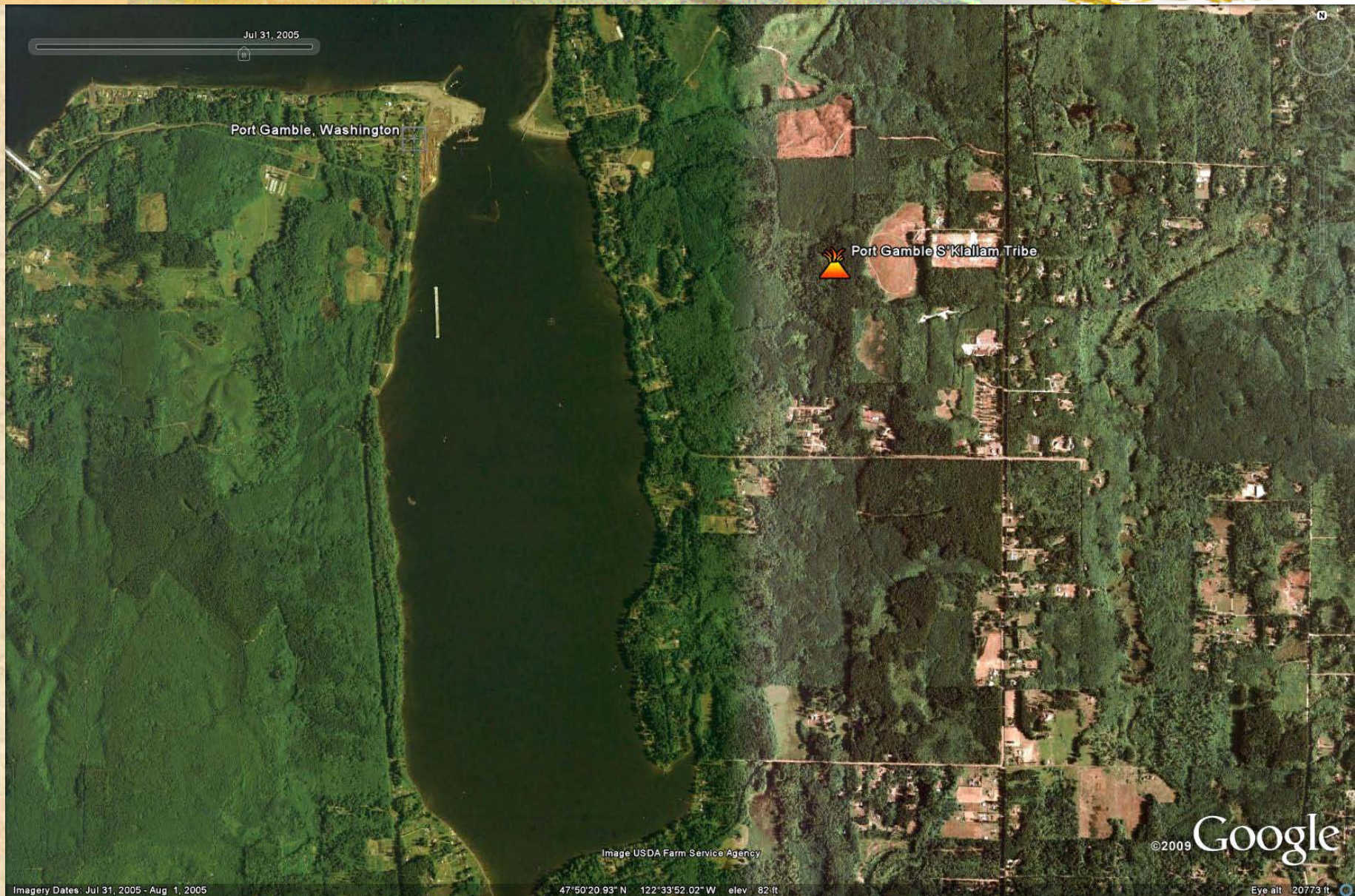
“Devils in the Details” ????



July 1990



July 31, 2005



Jul 31, 2005

Port Gamble, Washington



Port Gamble S'Klallam Tribe

Image USDA Farm Service Agency

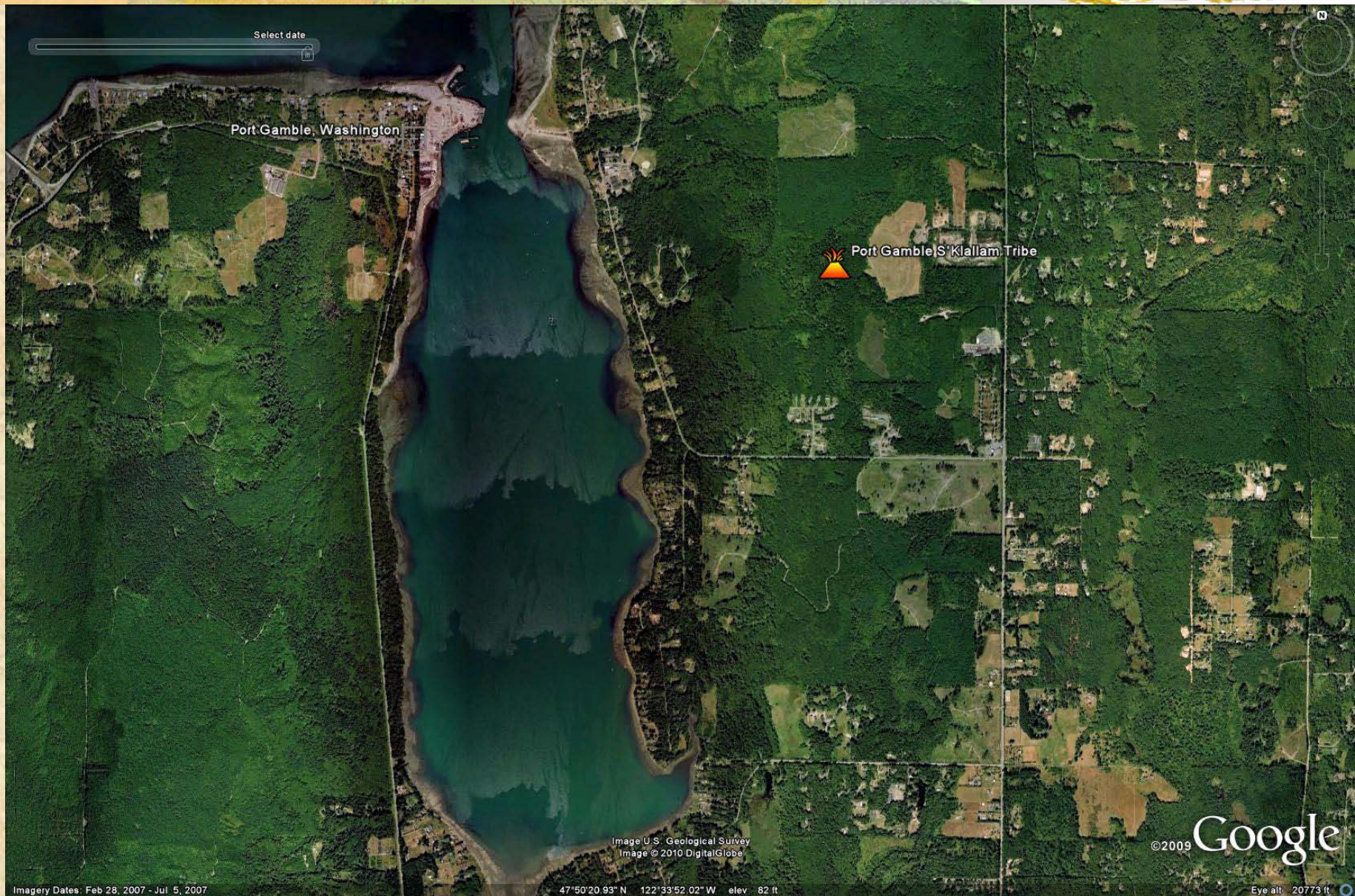
©2009 Google

Imagery Dates: Jul 31, 2005 - Aug 1, 2005

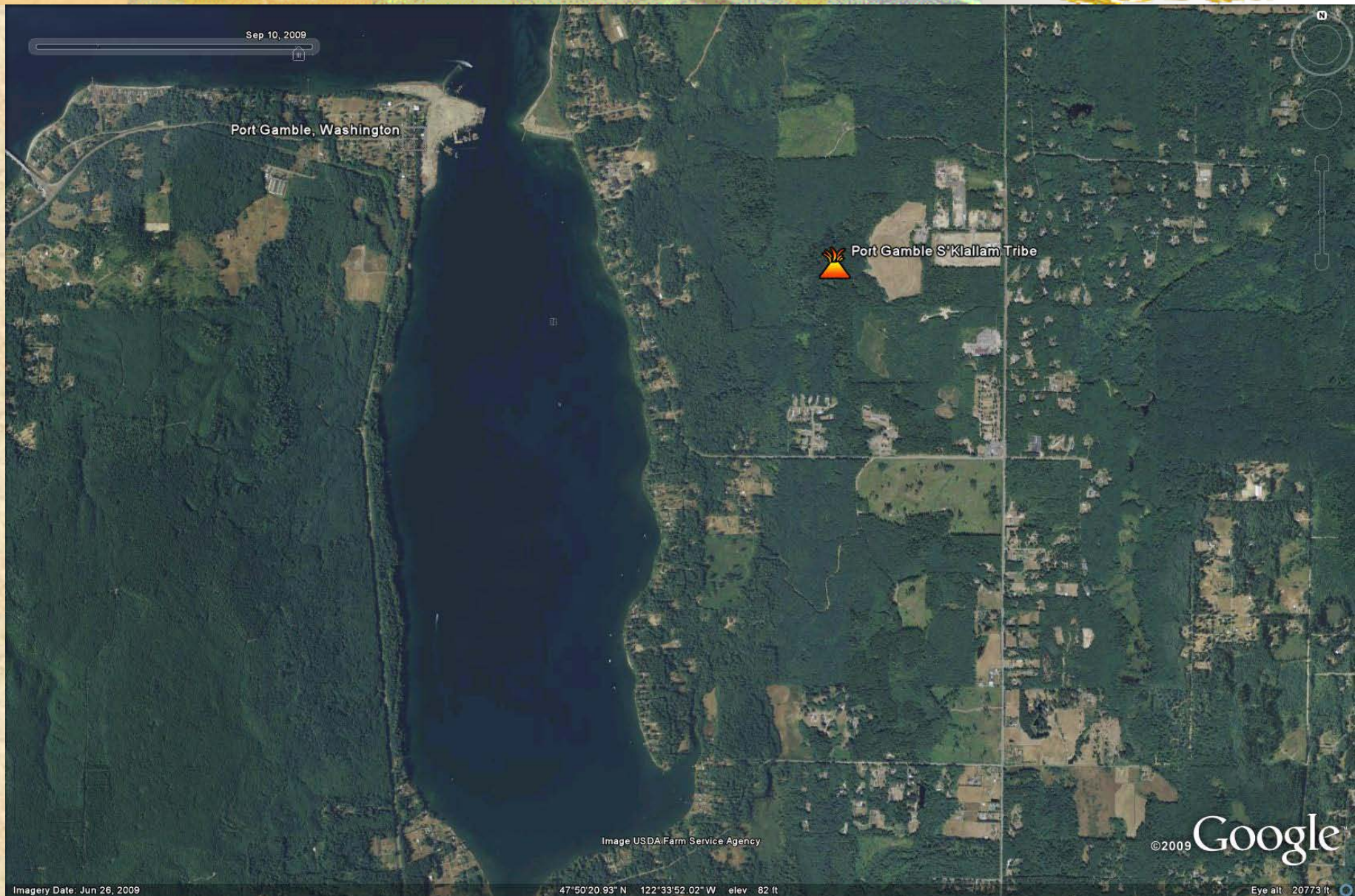
47°50'20.93" N 122°33'52.02" W elev. 82 ft

Eye alt. 20773 ft

June or July 2007



June 26, 2009



June 20, 1990

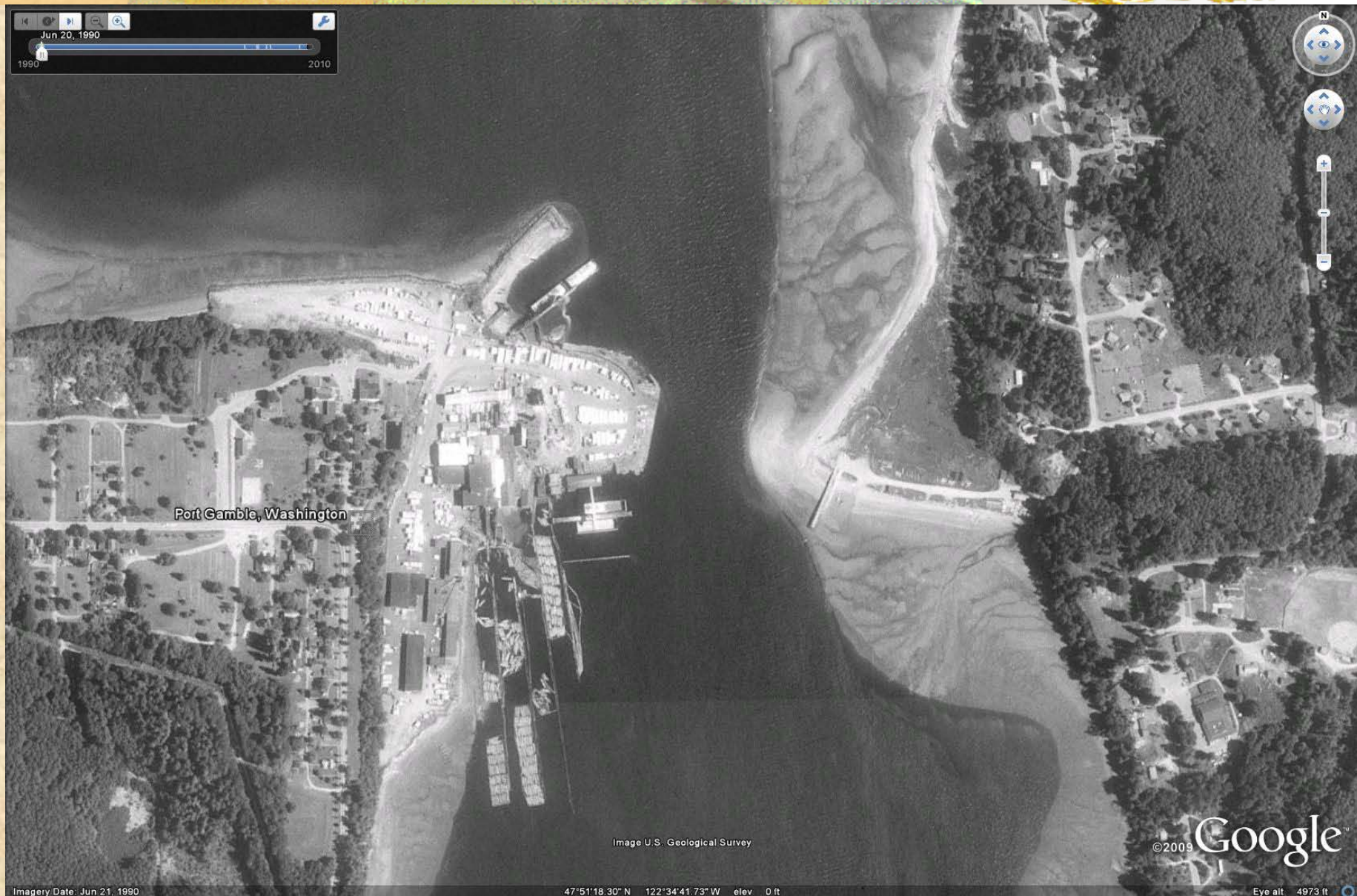
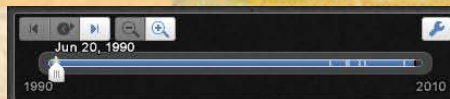


Image U.S. Geological Survey

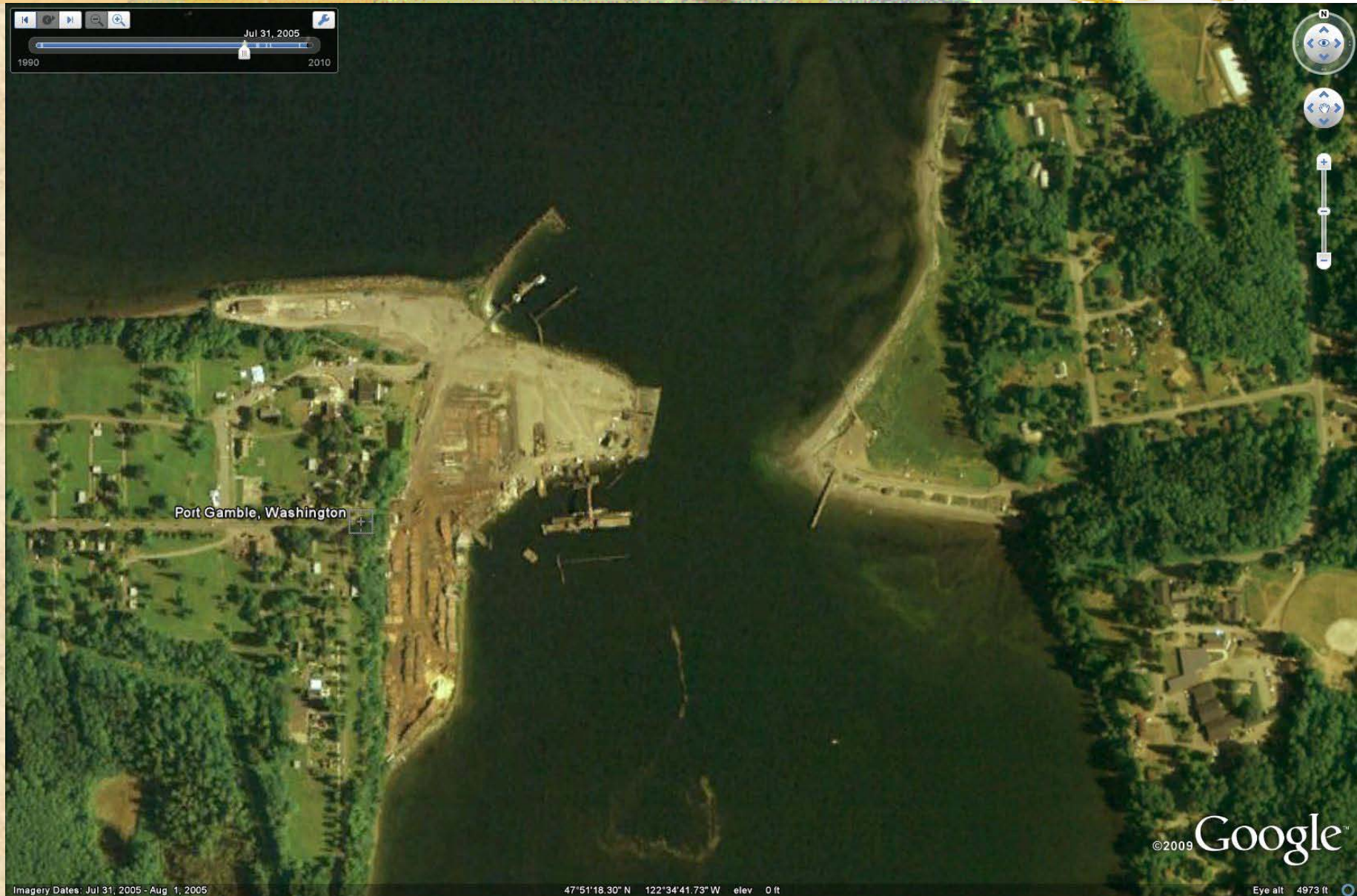
©2009 Google

Imagery Date: Jun 21, 1990

47°51'18.30" N 122°34'41.73" W elev 0 ft

Eye alt 4973 ft

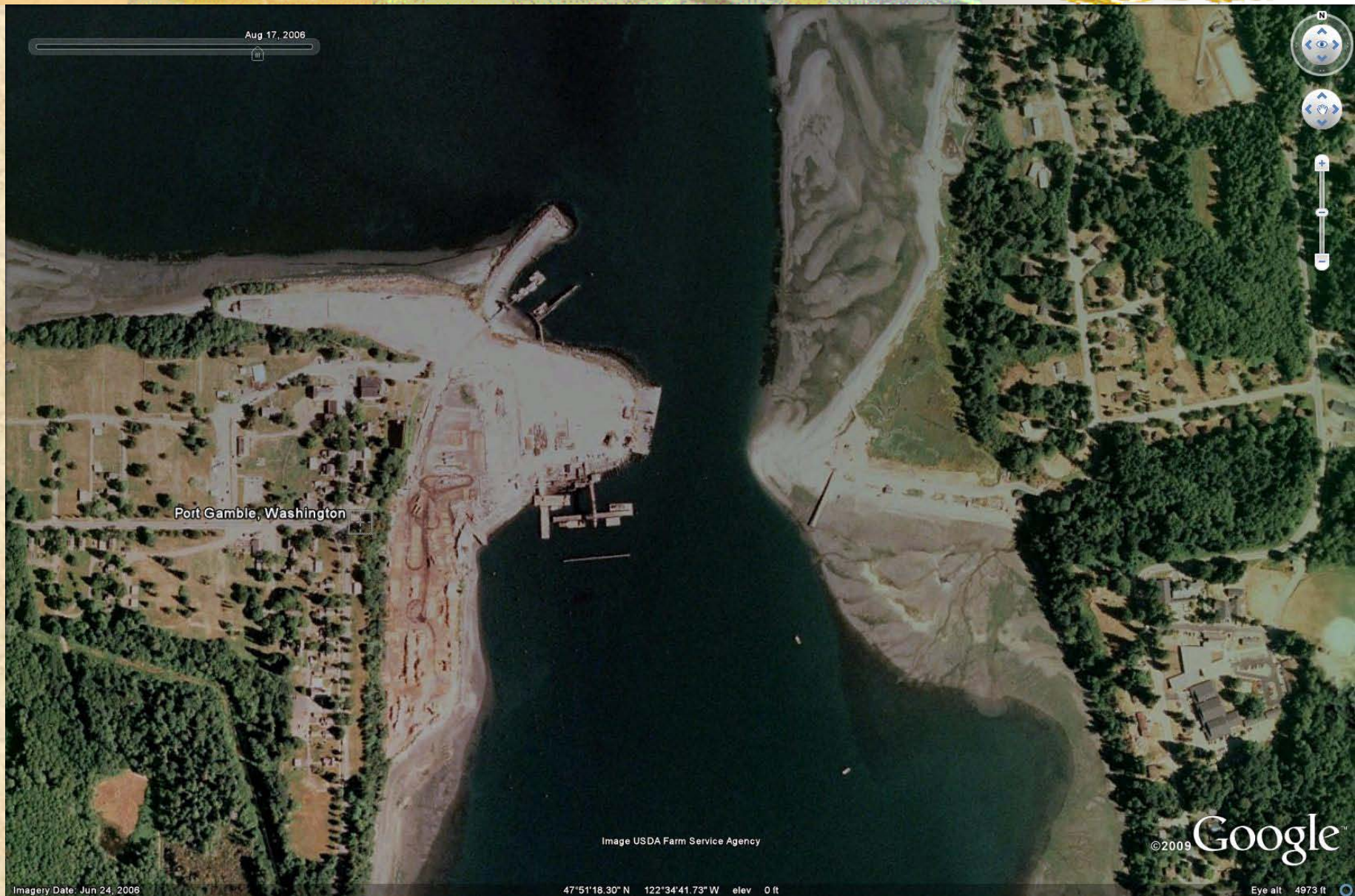
July 31, 2005



July 2006



June 24, 2006



August 7, 2006



March 2007



Port Gamble, Washington

Image U.S. Geological Survey

©2005 Google

Imagery Date: Feb 28, 2007

47°51'18.30" N 122°34'41.73" W elev 0 ft

Eye alt 4973 ft

July 5, 2007



Port Gamble, Washington

Image © 2010 DigitalGlobe

©2009 Google

Imagery Date: Jul 5, 2007

47°51'18.30" N 122°34'41.73" W elev 0 ft

Eye alt 4973 ft

June 26 2009



Sep 10, 2009

Port Gamble, Washington

Image USDA Farm Service Agency

©2009 Google™

Imagery Date: Jun 26, 2009

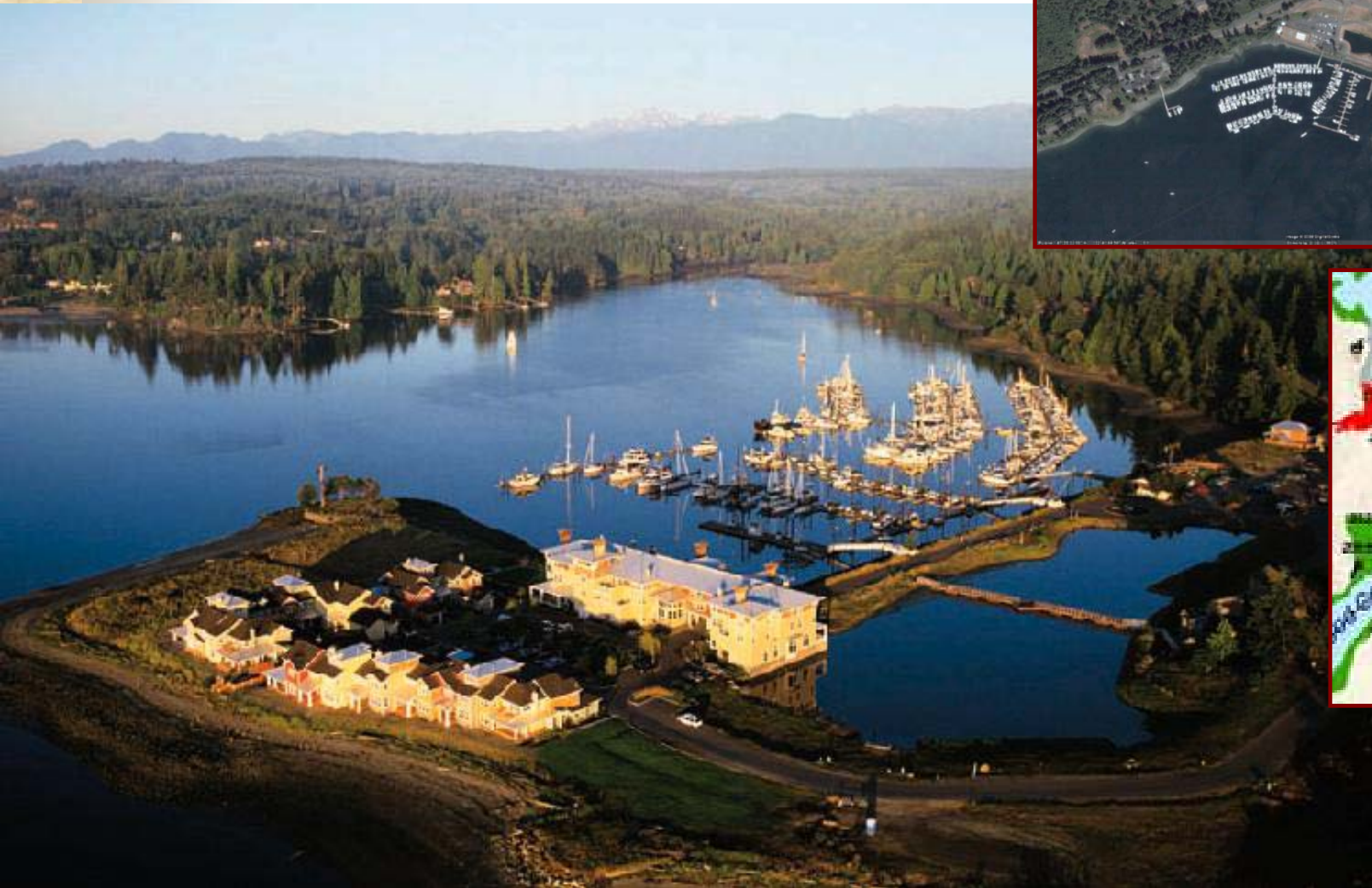
47°51'18.30" N 122°34'41.73" W elev 0 ft

Eye alt 4973 ft

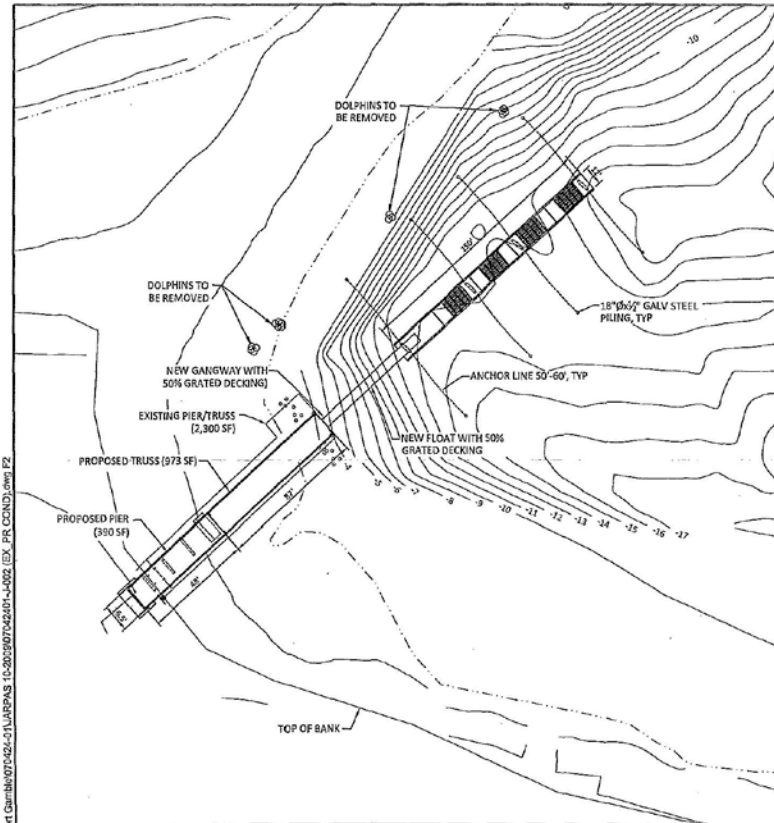


Port Ludlow Marina – A Similar OPG Effort

NO SHELLFISHING



The Proposed "Dock"



SOURCE: REID MIDDLETON, DATED 9/2009.



EXISTING AND PROPOSED CONDITIONS

PURPOSE: PROVIDE A FLOATING DOCK AND ACCESS PIER FACILITY AT PORT GAMBLE

DATUM: MLLW 0.0'
LATITUDE: 47°51'25"N
LONGITUDE: 122°34'51"W
S-T-R: 5-27N-2E

SITE LOCATION ADDRESS:
THE OLD MILL SITE
PORT GAMBLE, WA 99364

NAME: PORT GAMBLE DOCK PROJECT

ADJACENT PROPERTY OWNERS:
1 - CLIFFORD & CHRISTY MOREY
2 - MACHIAS CREEK ASSOCIATES, LLC.
3 - JILL MAURER
4 - RYAN HOLD

PROPOSED: COMMUNITY DOCK

IN: HOOD CANAL
NEAR/AT: PORT GAMBLE
COUNTY OF: UNINCORPORATED KITSAP
STATE: WASHINGTON

DATE: OCTOBER 2009

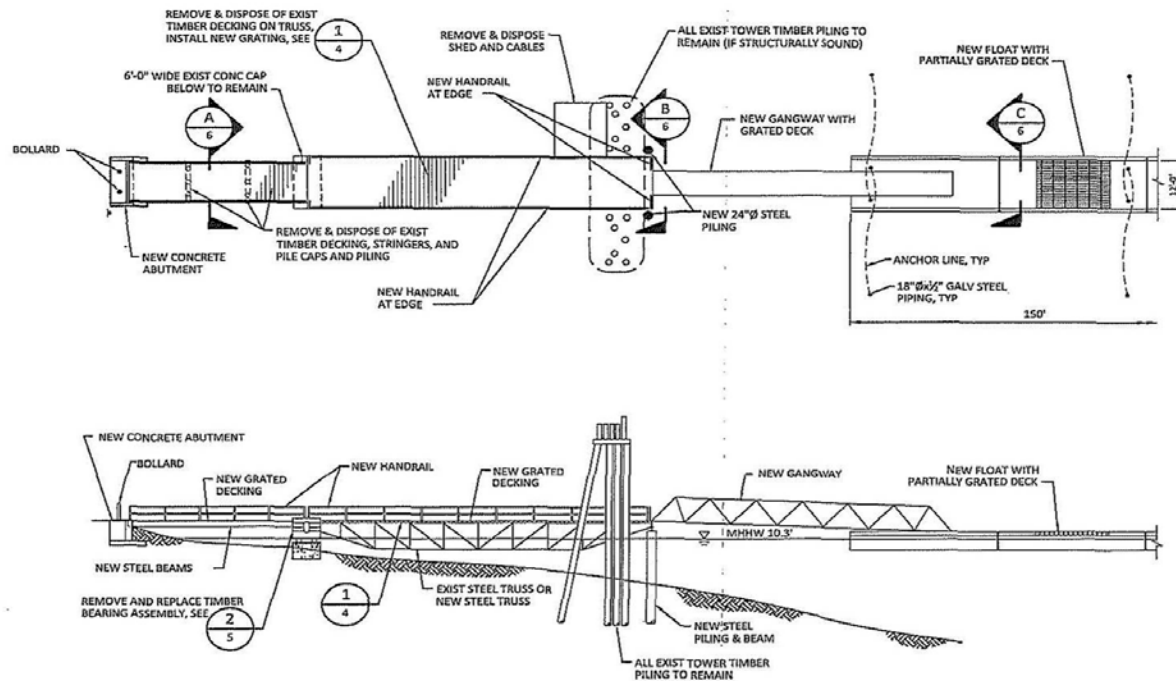
SHEET: 2 OF 6

Northern Embayment



K:\Jobs\070424-Port Gamble\070424-01\URPAS 10-2009\07042401-J003 (PROP PIER).dwg F3

Oct 21, 2009 11:13am hmlissen



0 400
SCALE IN FEET

ANCHOR
OEA
1605 Cornwall Avenue
Bellingham, WA 98225
360-733-4311

SOURCE: REID MIDDLETON, DATED 9/2009.

PROPOSED PIER AND FLOAT PLAN AND ELEVATION

PURPOSE: PROVIDE A FLOATING DOCK AND ACCESS PIER FACILITY AT PORT GAMBLE

DATUM: MLLW 0.0'
LATITUDE: 47°51'25"N
LONGITUDE: 122°34'51"W
S-T-R: 5-27N-2E

SITE LOCATION ADDRESS:
THE OLD MILL SITE
PORT GAMBLE, WA 99364

NAME: PORT GAMBLE DOCK PROJECT

ADJACENT PROPERTY OWNERS:
1 - CLIFFORD & CHRISTY MOREY
2 - MACHIAS CREEK ASSOCIATES, LLC.
3 - JILL MAURER
4 - RYAN HOLD

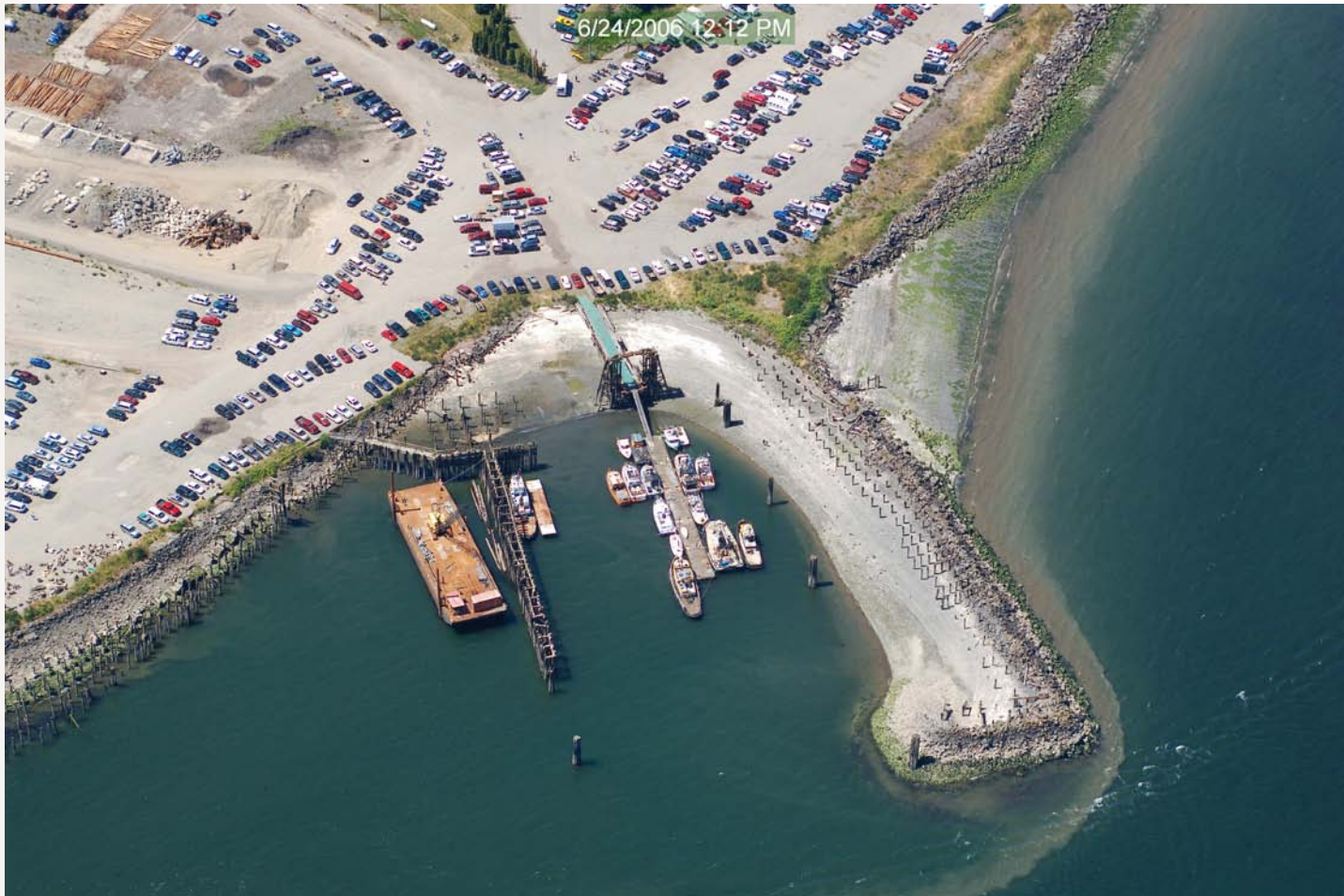
PROPOSED: COMMUNITY DOCK

IN: HOOD CANAL
NEAR/AT: PORT GAMBLE
COUNTY OF: UNINCORPORATED KITSAP
STATE: WASHINGTON

DATE: OCTOBER 2009

SHEET: 3 OF 6

Unauthorized Marina(s) Operation (from at least 2005 to October 2007)



Aerial photo taken June 24, 2006 during Port Gamble Civil War Re-enactment

Example of Consequences from Caicos' (and Pope's) Continued Industrial Operations in Port Gamble Bay




Photos of Caicos Diesel Spill at the South Mill Site 2005



Purpose of Pope's Dock (from Env Checklist)

- Overnight moorage will be provided at the dock for commercial and recreational vessels by invitation only.
- However, no fees will be charged and moorage will be allowed on a first come, first served basis.
- The dock will also be used for mooring vessels associated with the adjacent upland industrial area, such as tugboats, barges, or other work related vessels.
- OPG will also allow the dock to be used as a safe harbor for vessels as needed during inclement weather events.

- 
- The 150-foot length of the float will allow up to **100-foot-long tour boats to moor at the dock while maintaining adequate room for other vessels coming and going and maintaining provisions for seaplanes that should be on the outer side of the dock away from the main tour vessels.**
 - The proposed dock length will provide adequate safety separation between the **seaplane, commercial, industrial, and recreational vessels, and passenger boat services.**



Kitsap County Code 22.28.190 Piers and floating docks

- In areas identified by the Washington Departments of Fish and Wildlife, or Natural Resources as having a high environmental value for shellfish, fish life, or wildlife, piers and docks shall not be allowed except where functionally necessary to the propagation, harvesting, testing or experimentation of said marine fisheries or wildlife, unless it can be established conclusively, as determined by the shoreline administrator, that the dock or pier will not be detrimental to the natural habitat or species of concern.



Kitsap County Hood Canal Shoreline Of Statewide Significance Policies (KCC 22.24)

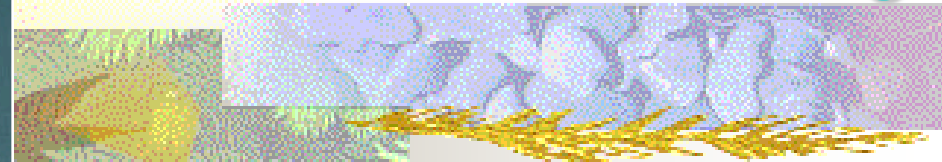
- HOOD CANAL SHORELINE OF STATEWIDE SIGNIFICANCE POLICIES
- J. Resource Goal. In recognition of the resources of Hood Canal, development proposals should be reviewed with respect to preservation of natural resources of the Canal. In addition to development guidelines listed in the beginning of this section, the following policies should specifically apply to development in Hood Canal.
 - 1. **Resource Policy 1. Proposals for development within the shoreline jurisdiction of Hood Canal should be required to assess potential for adverse impacts to the following resources: water quality sediment quality, shellfish, fin fish, wildlife, boating, recreational and commercial fishing, public access, scenic vistas, and wetlands. Proposals that significantly interfere with recreational opportunities or significantly degrade the resources of Hood Canal should be prohibited.**
 - 2. **Resource Policy 2. Developments within the shorelines of Hood Canal which would significantly degrade water or sediment quality, shellfish, fin fish or wildlife habitat, critical habitat, native vegetation, or natural features of the shoreline should be prohibited.**





Port Gamble Mill Site and DNR Lease Area

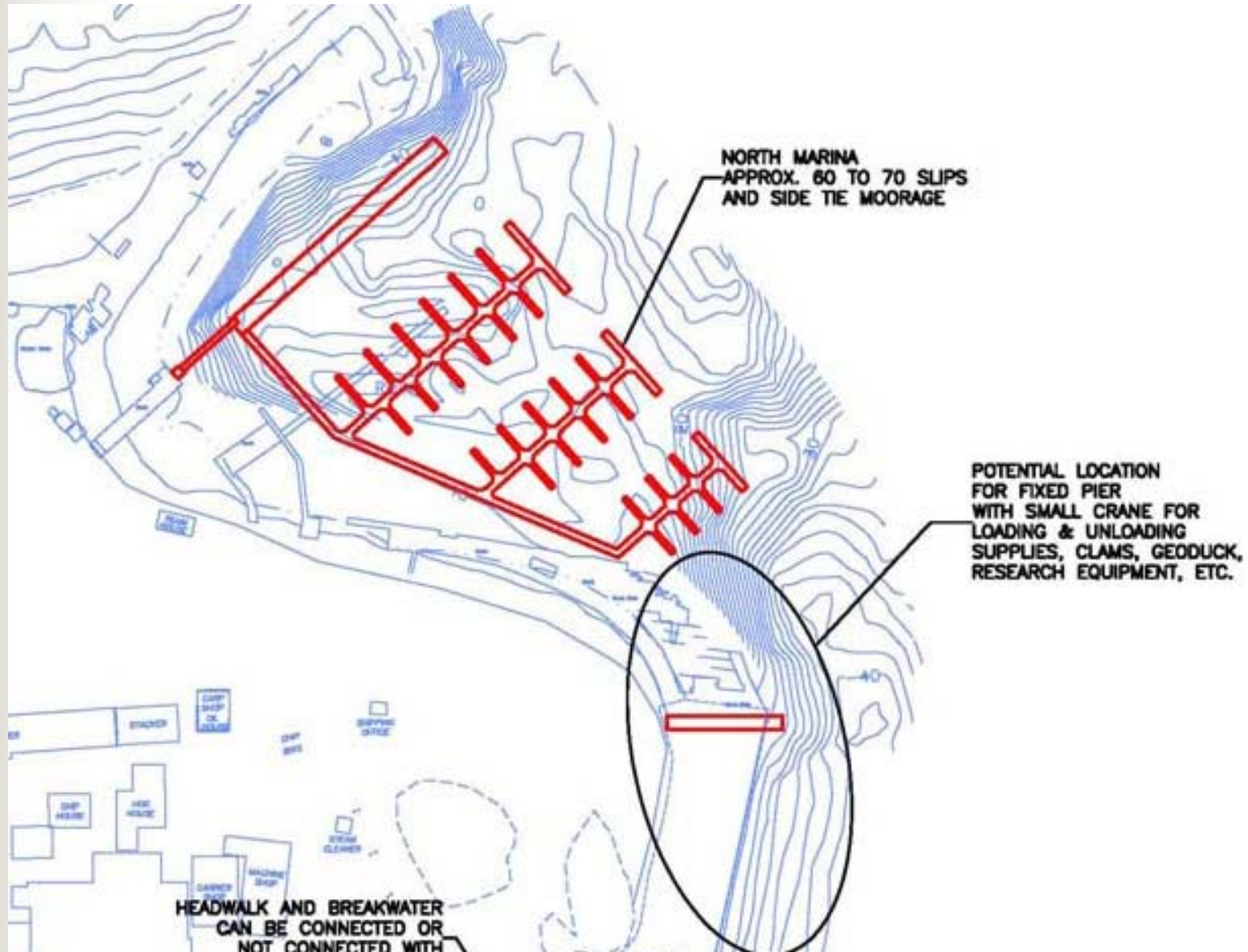
Agreed Order Kickoff Meeting



June, 2007



North Mill Site Marina Concept – June 19, 2007



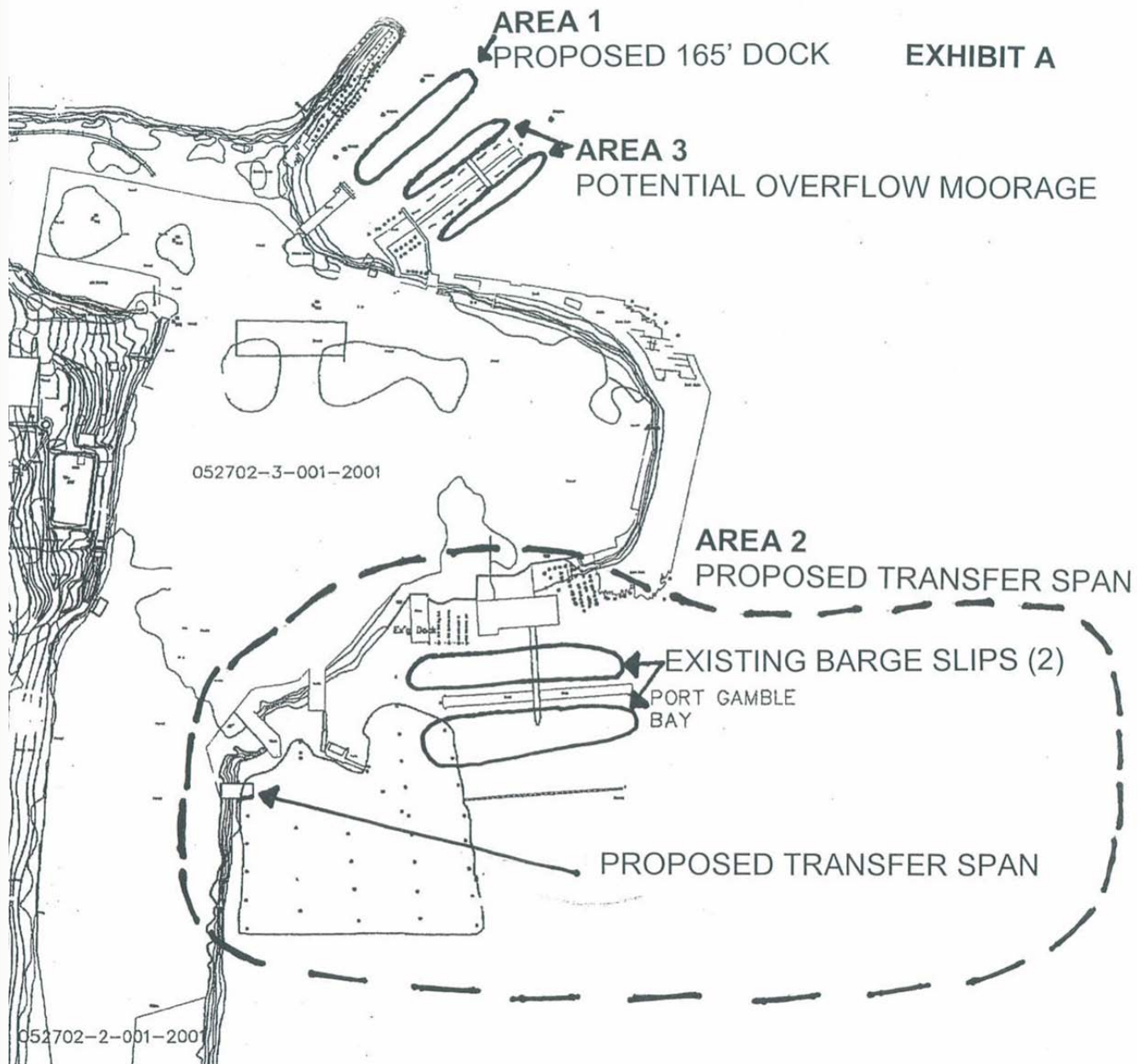


EXHIBIT A



USACE RHA 10 and NMFS ESA 7

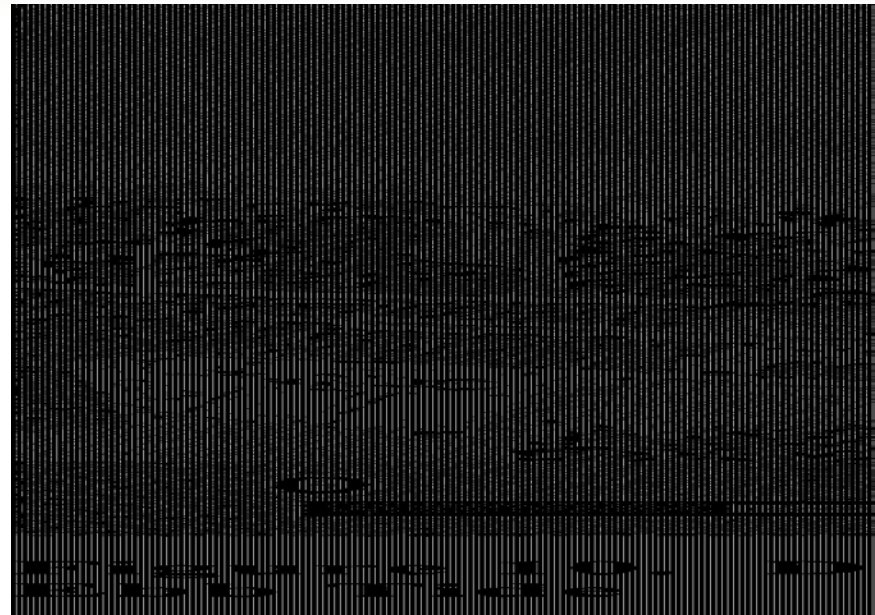
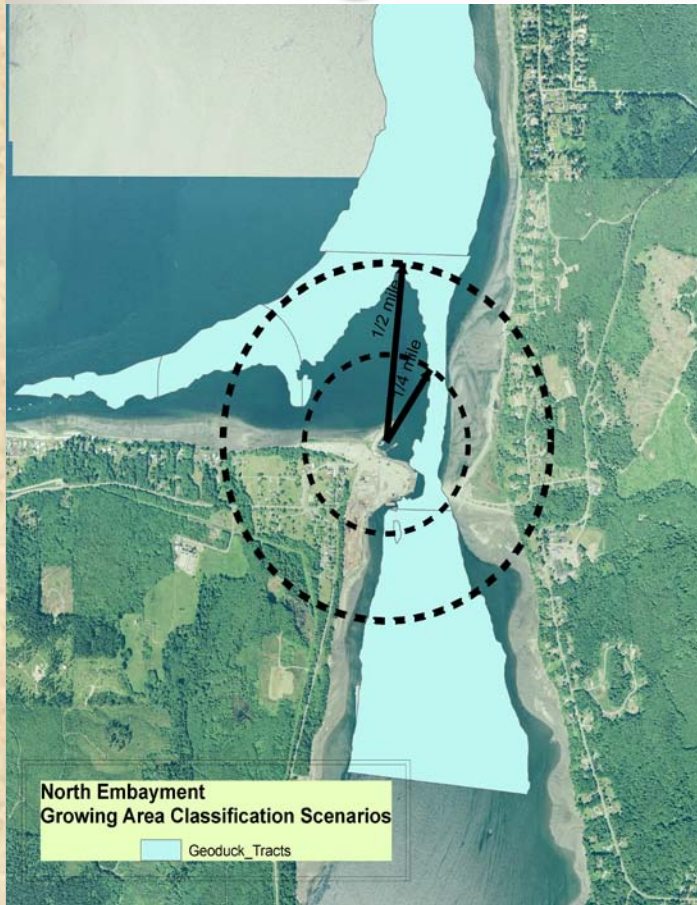
- **Sept 6, 2007 Letter of Non-Concurrence from NMFS**
 - Effects of floating dock to herring spawning habitat, primary forage fish
 - Questioned ongoing effect from unauthorized marina
- **USACE**
 - Cancellation of application (Apr 1 2008) and advice
 - *Govt-to-Govt immediately upon receipt of any new application*

WHY THE BIG DEAL?

- Resources and Ability to Conduct Treaty Harvest
 - Shellfish – ability to harvest (access, including physical and regulatory) and ability to harvest safely (public health)
 - Fecal coliform loading & Shellfish Closure Zone
 - Suspension of toxic mill sediment and wood waste
 - “Threshold issue of no closures”
 - Herring and Salmon – importance as key forage fish in Puget Sound marine ecosystem
- Health of Tribal Subsistence Consumers
- Safety of Tribe fishing and Recreation
- Aesthetics
- Preservation of historic and cultural resources



Dueling Shellfish Closure Models



NewFields 2008 “concurrent rectangles”

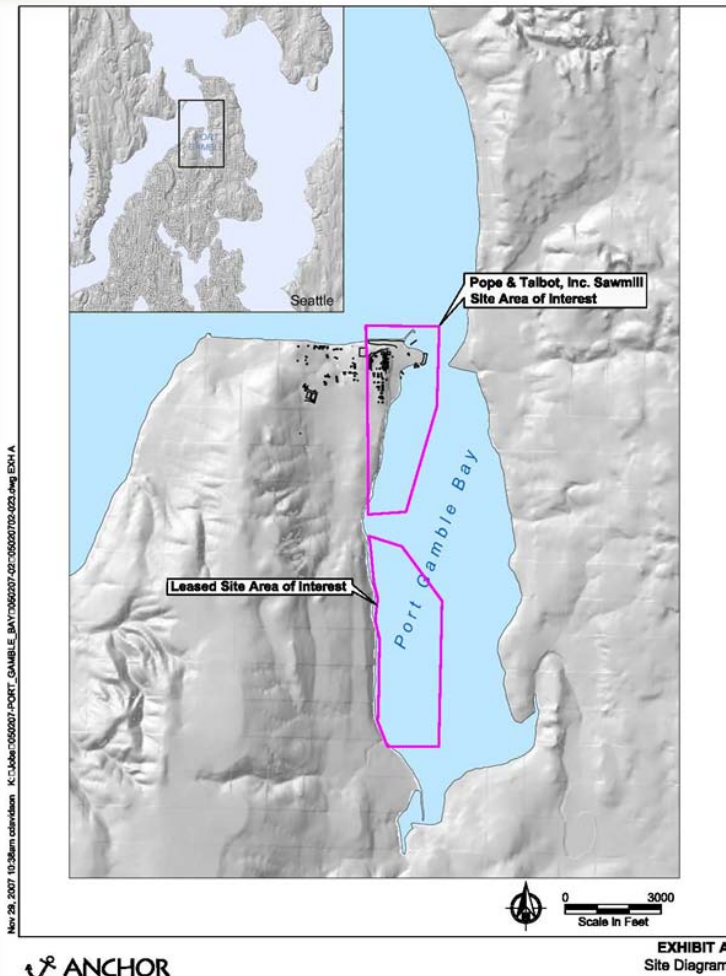
- VIMS model – marina proper closure (def of marina)
- But also closures or expansions based on water quality, increased monitoring efforts
- Refer back to Port Ludlow



“The Clean-Up”

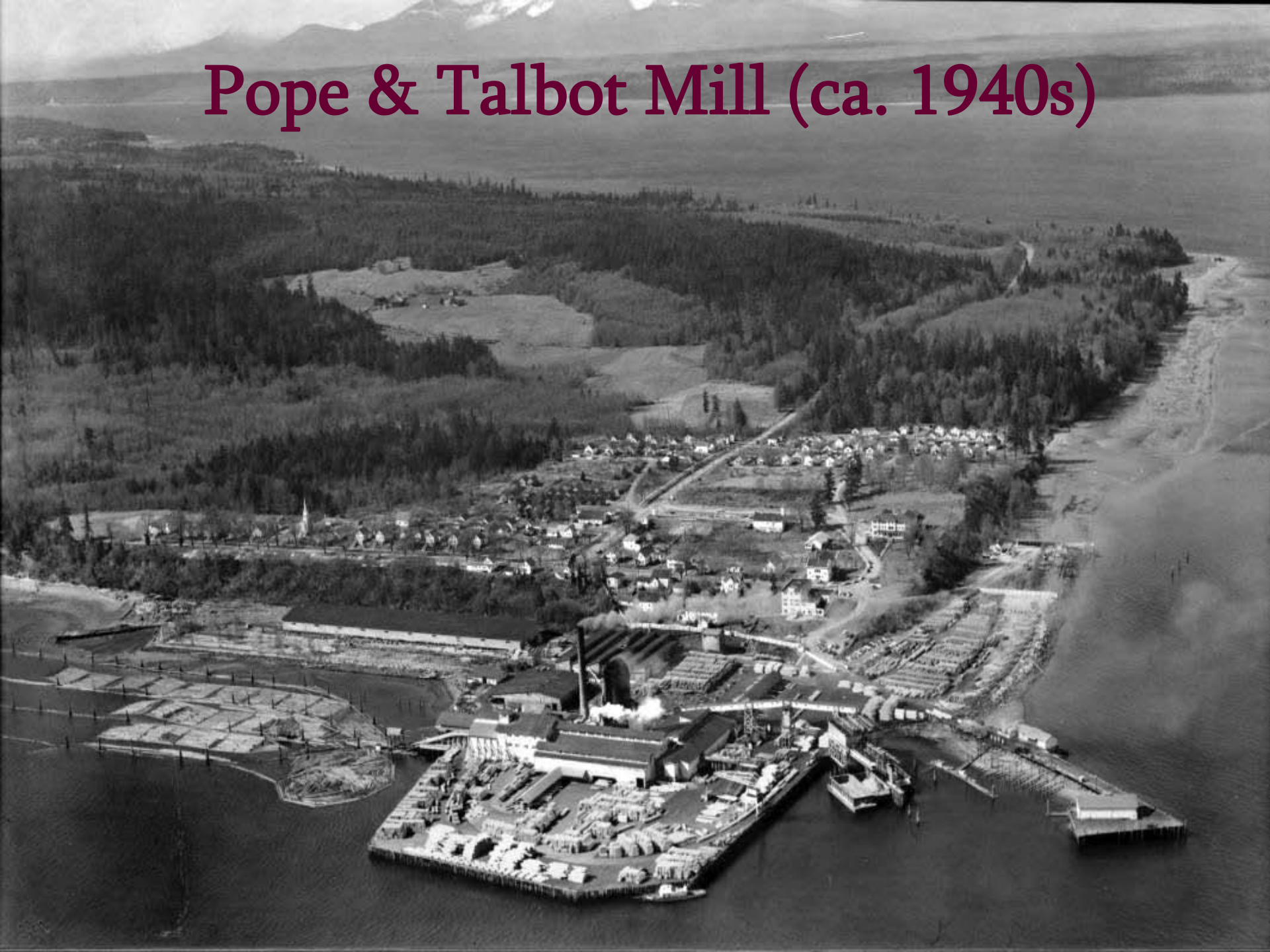
Ecology Toxics (MTCA)

CLEAN-UP under MTCA



- Previous cleanups, 2002 (upland) 2003 and 2007 (dredge) interim actions
 - Cultural resource issues
 - Clam bucket issues
 - Capping issues
 - Sampling has large gaps
- Ecology - two site approach
 - Pope/OPG “Mill Site” AO
 - DNR “Log Storage Yard”
- Mostly focused on wood waste

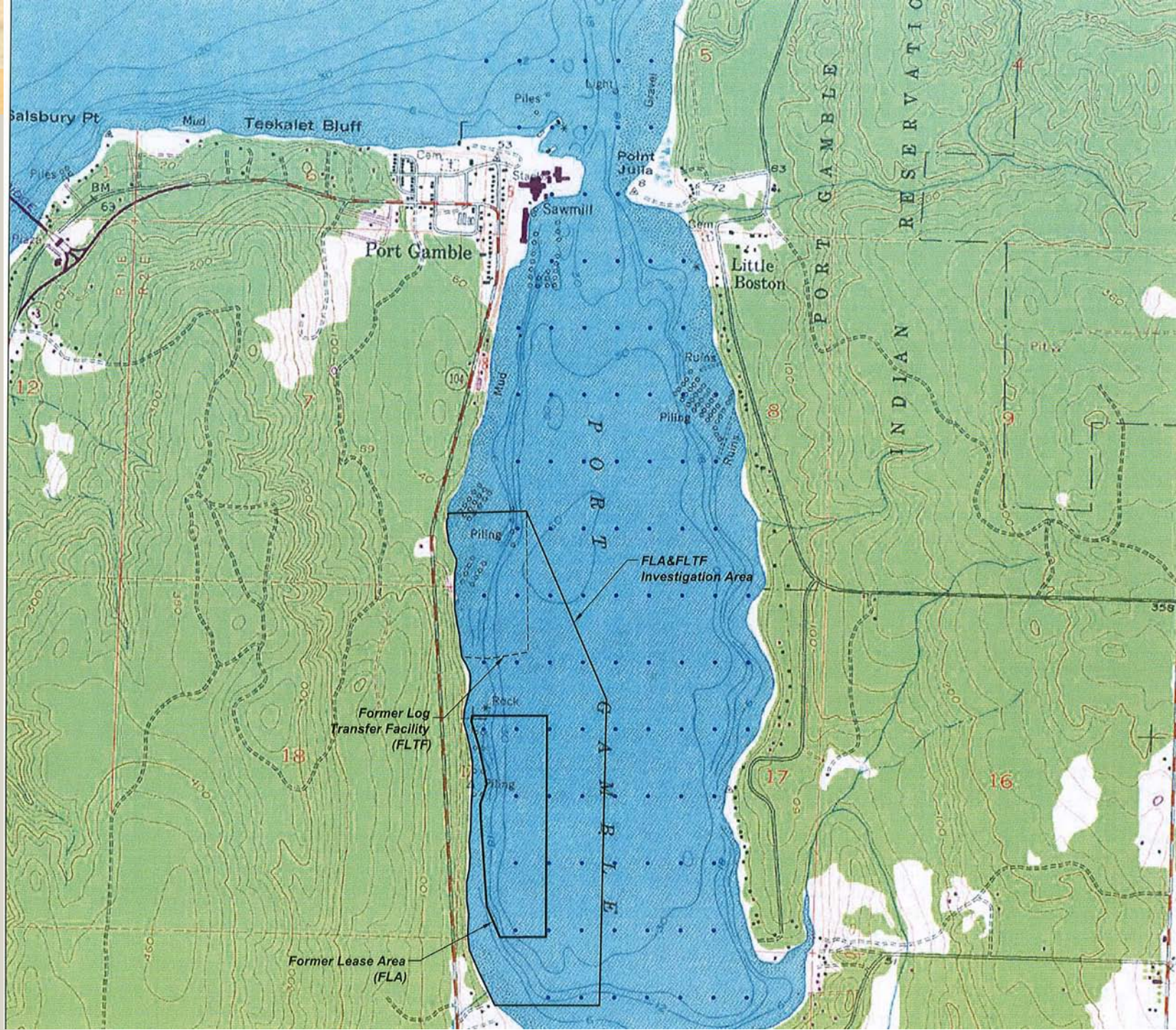
Pope & Talbot Mill (ca. 1940s)





Site History

- before – Port Gamble S'Klallam Tribal Village (Teekalet)
- 1853 – Mill and Town Constructed, Tribe → Pt. Julia
- 1920s – Northern Chip Loading
- 1970s – Southern Chip Loading
- 1985 – Pope Resources Transfer
- 1995 – Mill Closure
- 1997 – Mill Facility Demolition
- 1998 – Cleanup Study Begins
- 2002 – Initiation of Soil Interim Actions
- 2003 – Sediment Wood Debris Interim Action
- 2007 – Second Sediment Wood Debris Interim Action
- 2008 – Baywide Sampling
- 2009 – Remedial Investigation and Feasibility Study (RI-FS)



Sediment Profile Imaging (SPI)

The First Look

General benthic habitat quality:

- Wood Waste
- Dissolved Oxygen
- depth of the apparent redox potential
- sedimentary methane
- infaunal successional stage





DEPARTMENT OF
ECOLOGY
State of Washington

Legend

● SPI Samples

SPI L
Port

PG22-a



DEPARTMENT OF
ECOLOGY
State of Washington

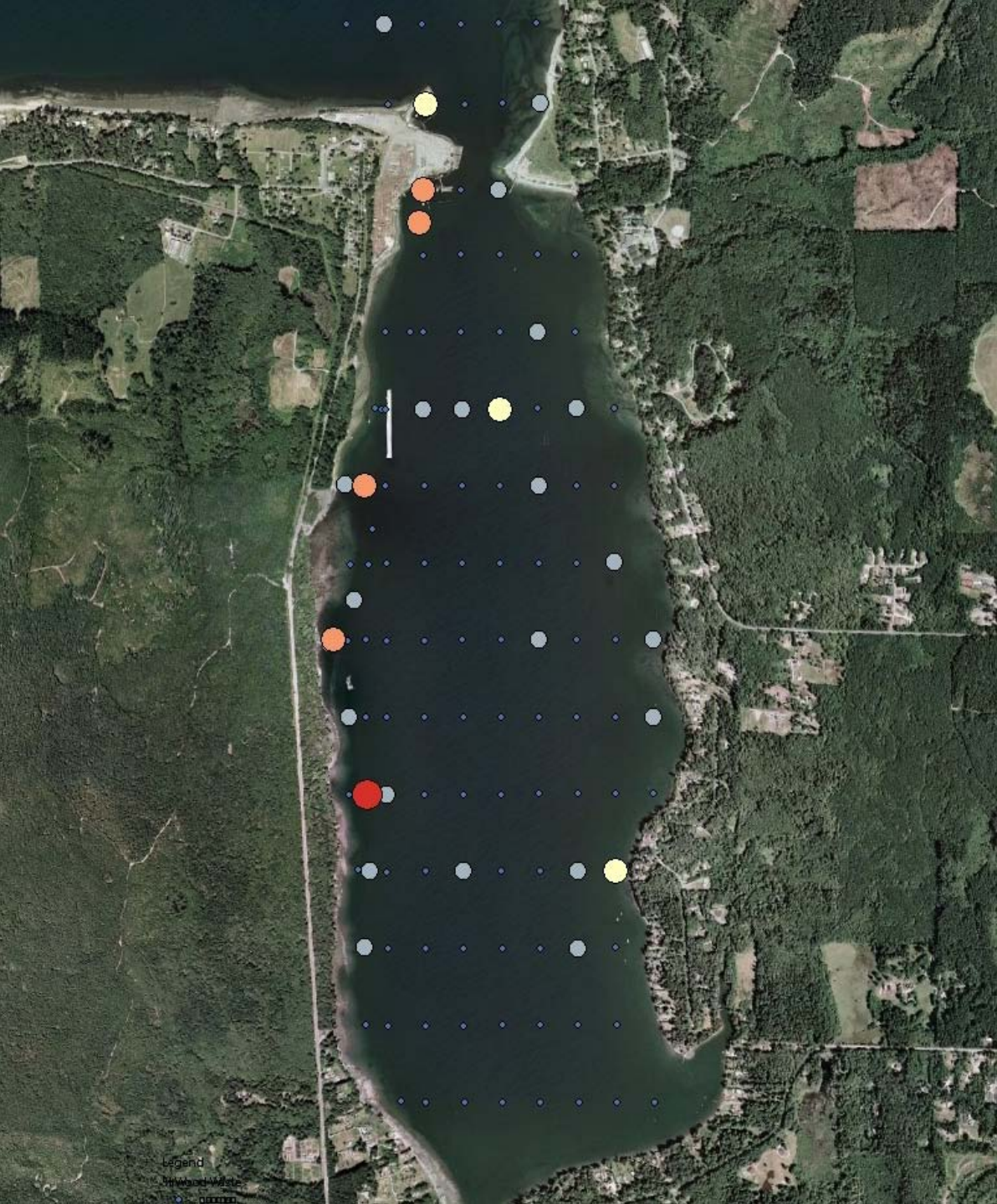
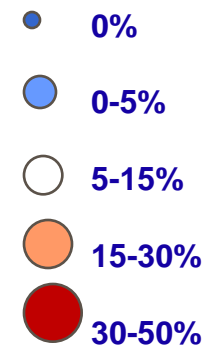
Legend

● SPI Samples

SPI L
Port

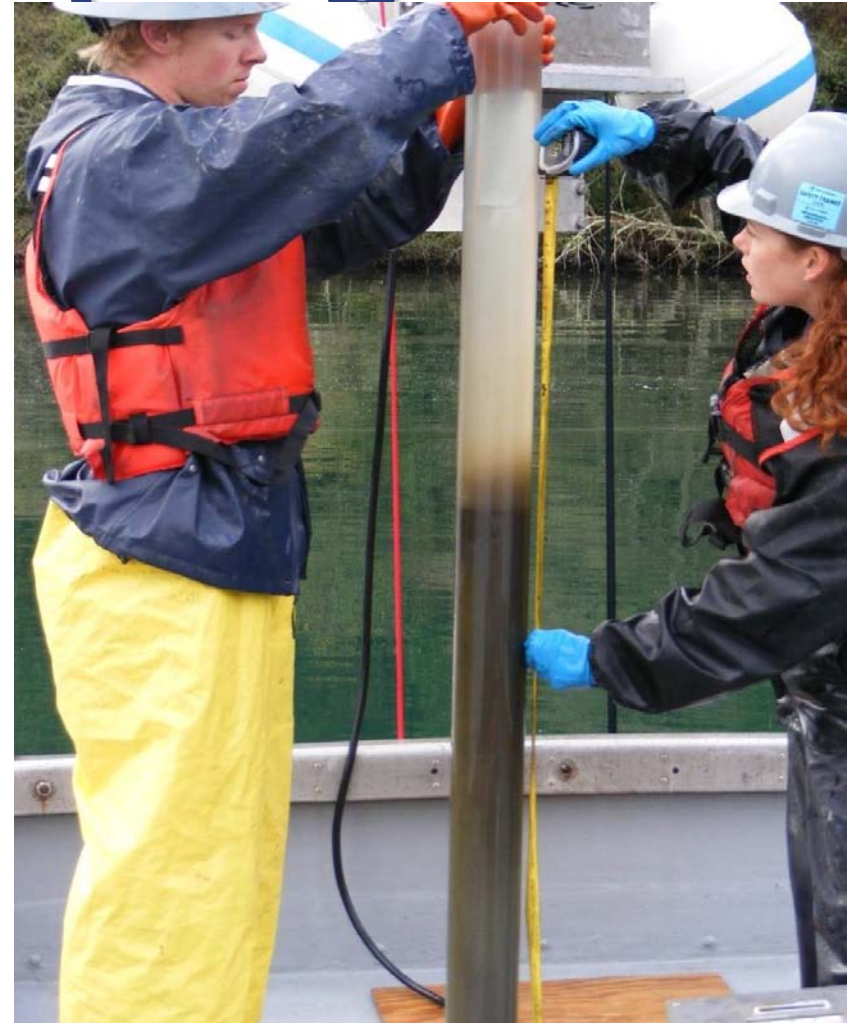
SPI

Percent Wood Waste

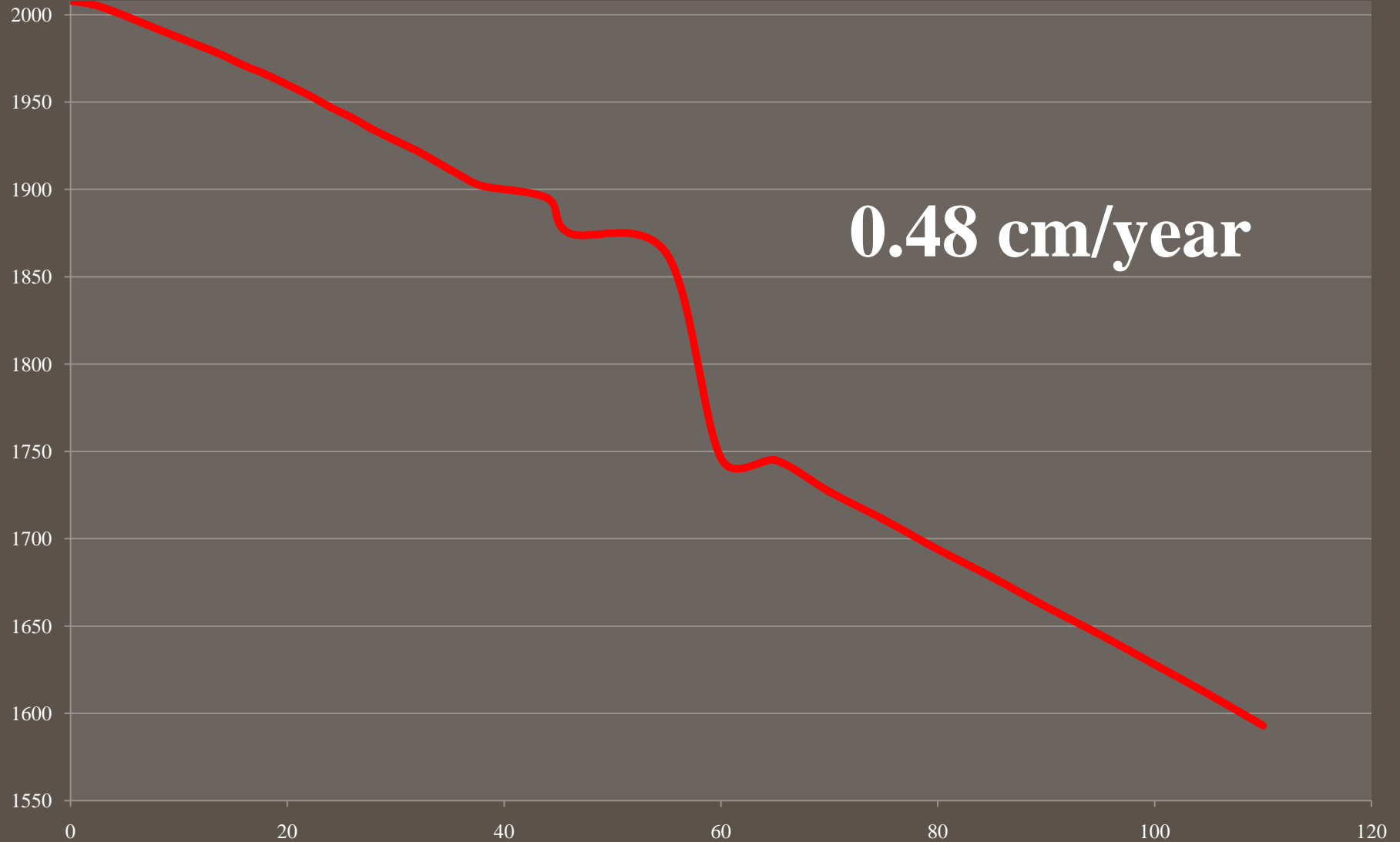


2nd Tier Sampling

- **50 Lexan Cores**
- **2 Cores collected for radiometric analysis**



Radiometric Core # 22



3rd Tier Sampling

- 52 surface grab samples
 - Conventionals & SMS chemicals
 - 10 Dioxin Samples



Chemistry Results

Chemistry:
Phenol –SQS hit

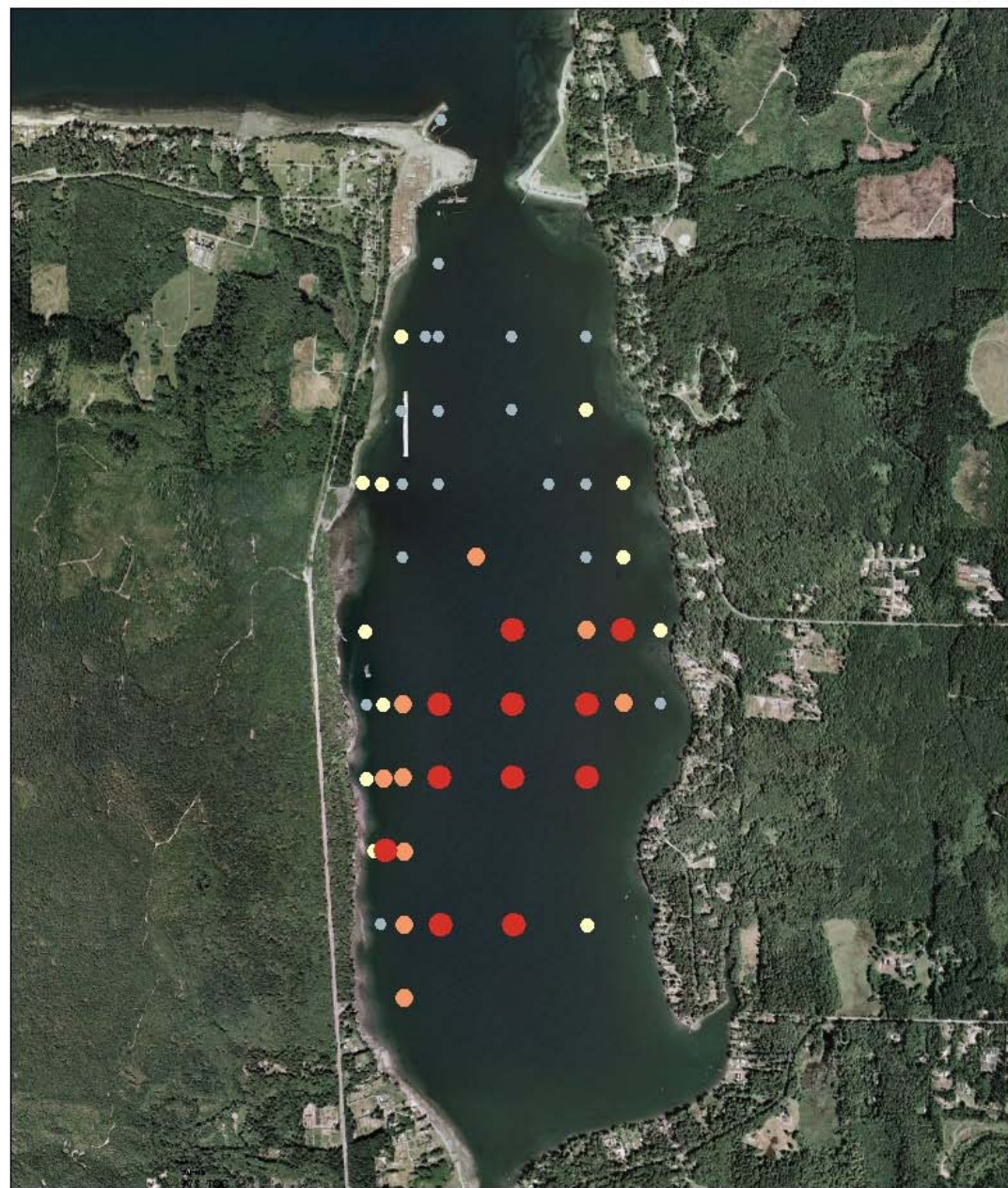


Chemistry Results

Conventionals

■ Sulfide

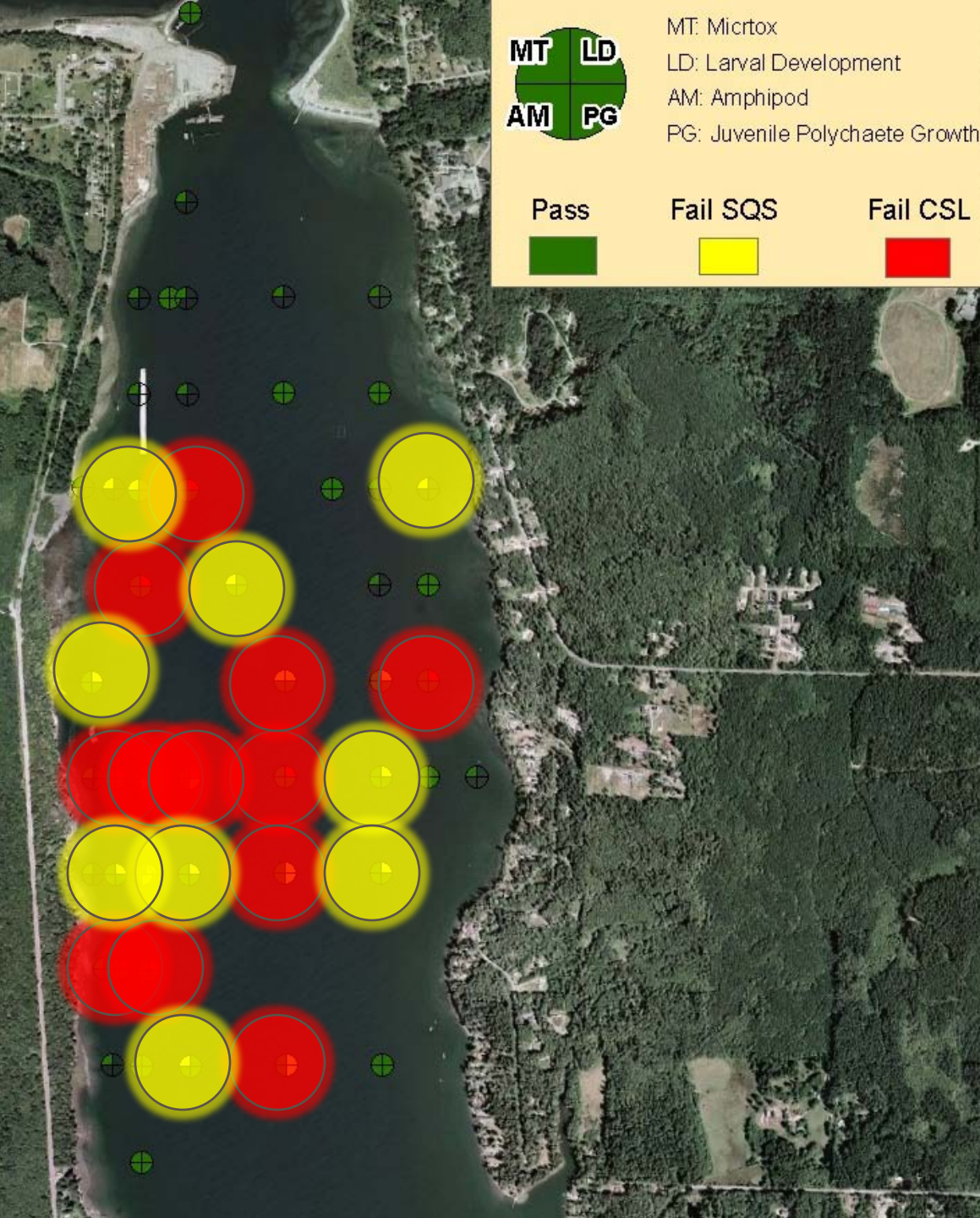
■ TVS/TOC



TVS/TOC



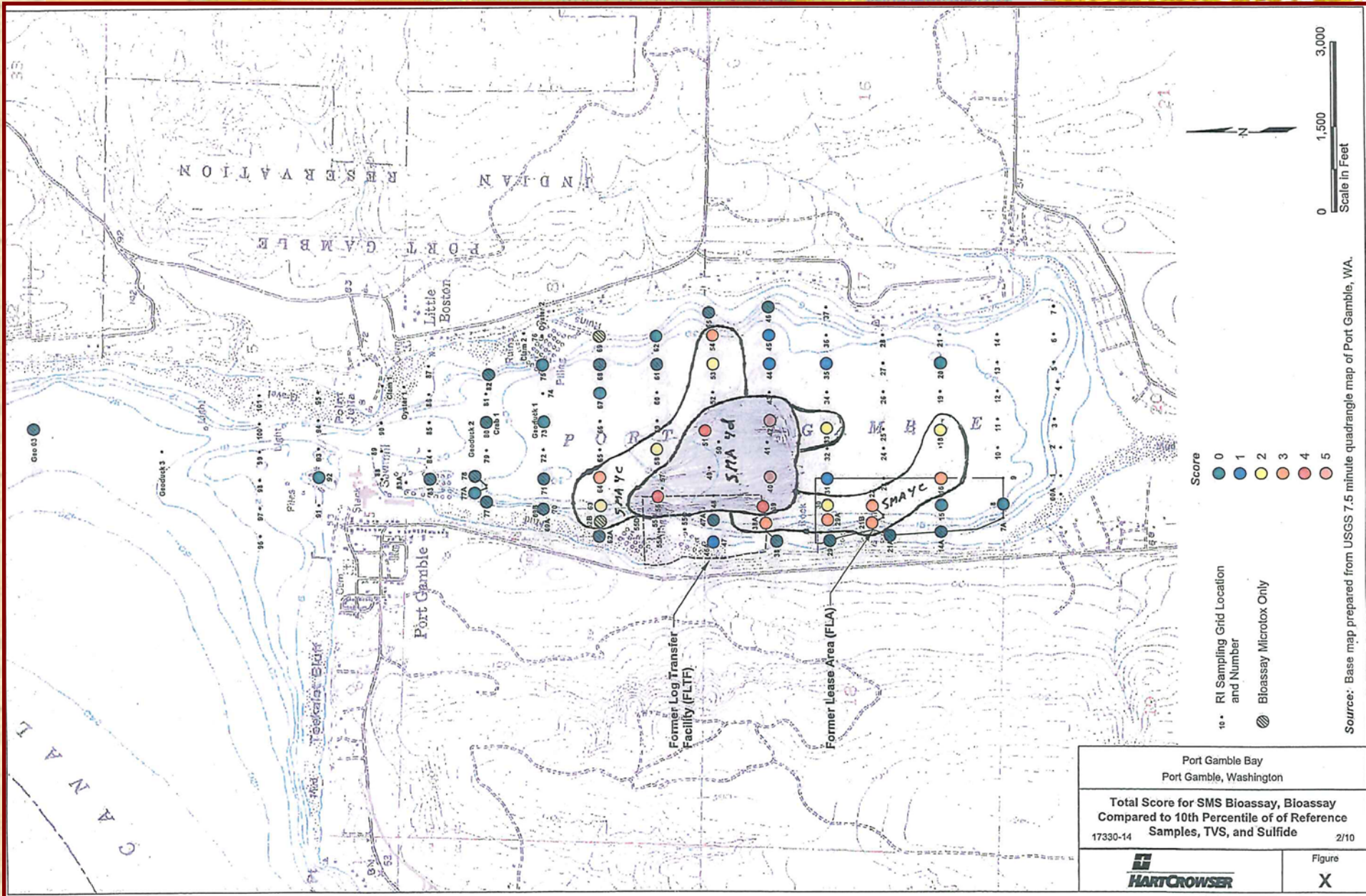
0 275 501, 100, 650, 200 Feet



Biological Toxicity Testing

- 31 Stations
- 50 Microtox

- 12 CSL Hits
- 9 SQS Hits



Port Gamble Bay Port Gamble, Washington	
Total Score for SMS Bioassay, Bioassay Compared to 10th Percentile of Reference Samples, TVS, and Sulfide	
17330-14	2/10
	Figure X

Source: Base map prepared from USGS 7.5 minute quadrangle map of Port Gamble, WA.



Tissue

- 1 Dungeness crab
- 3 Geoduck
- 2 Oysters
- 2 Littleneck Clam



Tissue (seafood)

- Tissue samples prepped and tested for:
 - Dioxins/furans
 - Metals:
mercury, lead, arsenic, zinc, copper, chromium, cadmium, silver
 - PCBs
 - Lipids



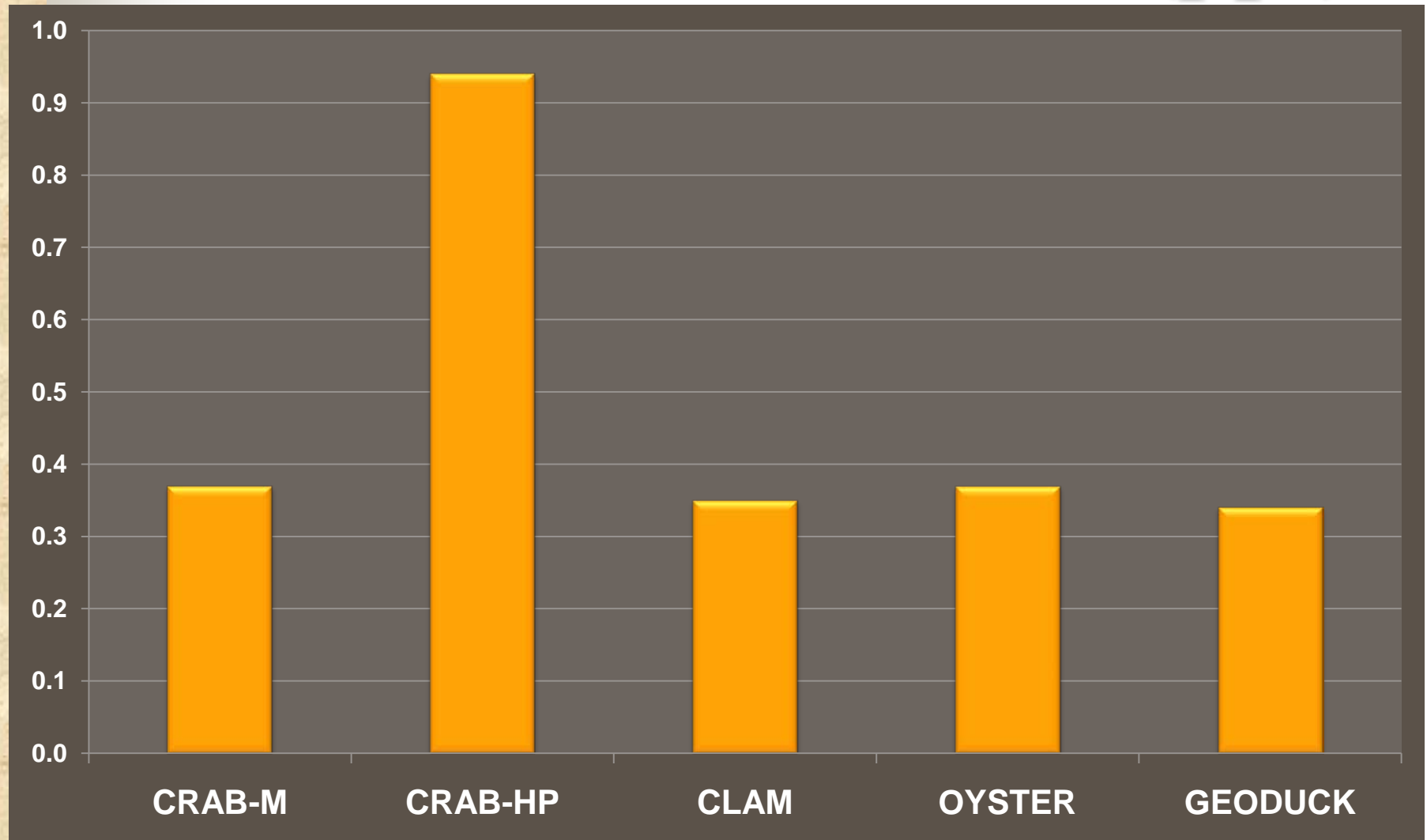
Dungeness Crab Values (ppm)

■	Arsenic =	7.0
■	Cadmium =	0.04
■	Chromium =	0.1
■	Copper =	8.65
■	Dioxin/Furans =	0.0000004
■	Lead =	4.0
■	Methylmercury =	0.047
■	Silver =	0.19
■	Zinc =	0.502

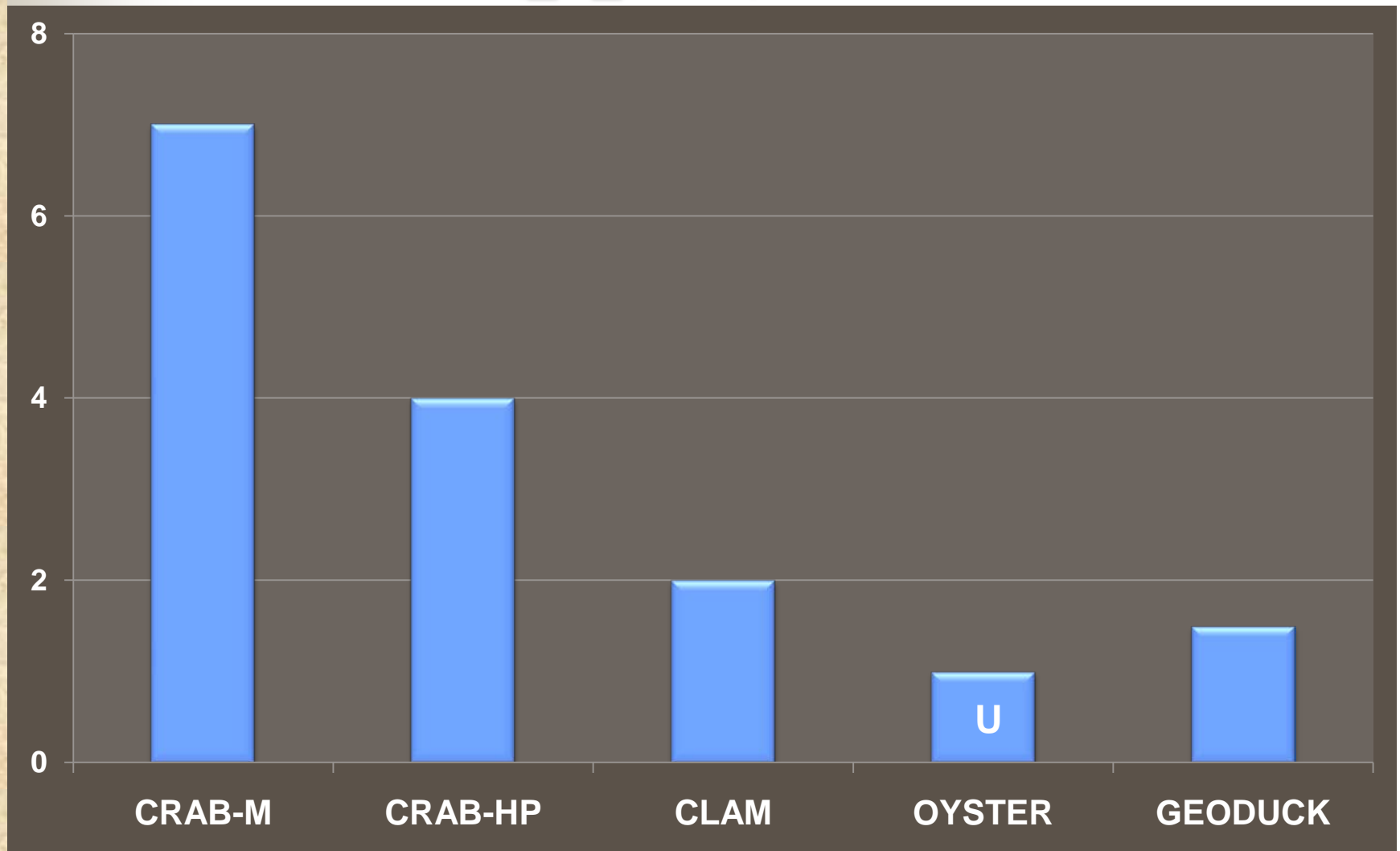


A recent analysis of Dungeness crab (small limited study) in outer Hood Canal resulted in these chemical detections (Dioxin Toxic Equivalent [TEQ] values include half of the MDL for non detected congeners)

Tissue - Dioxin/Furan (ppt)



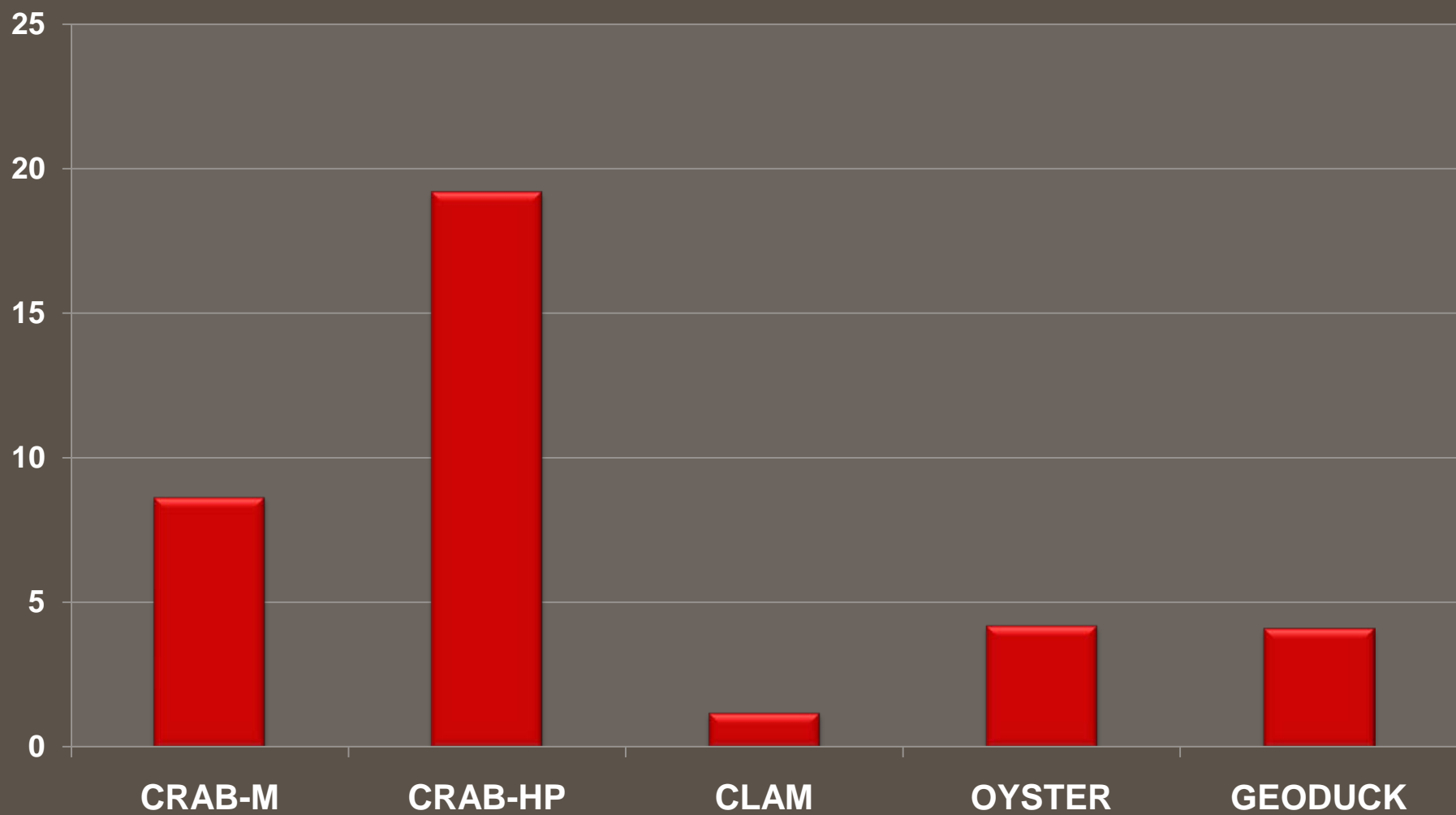
Arsenic (ppm)



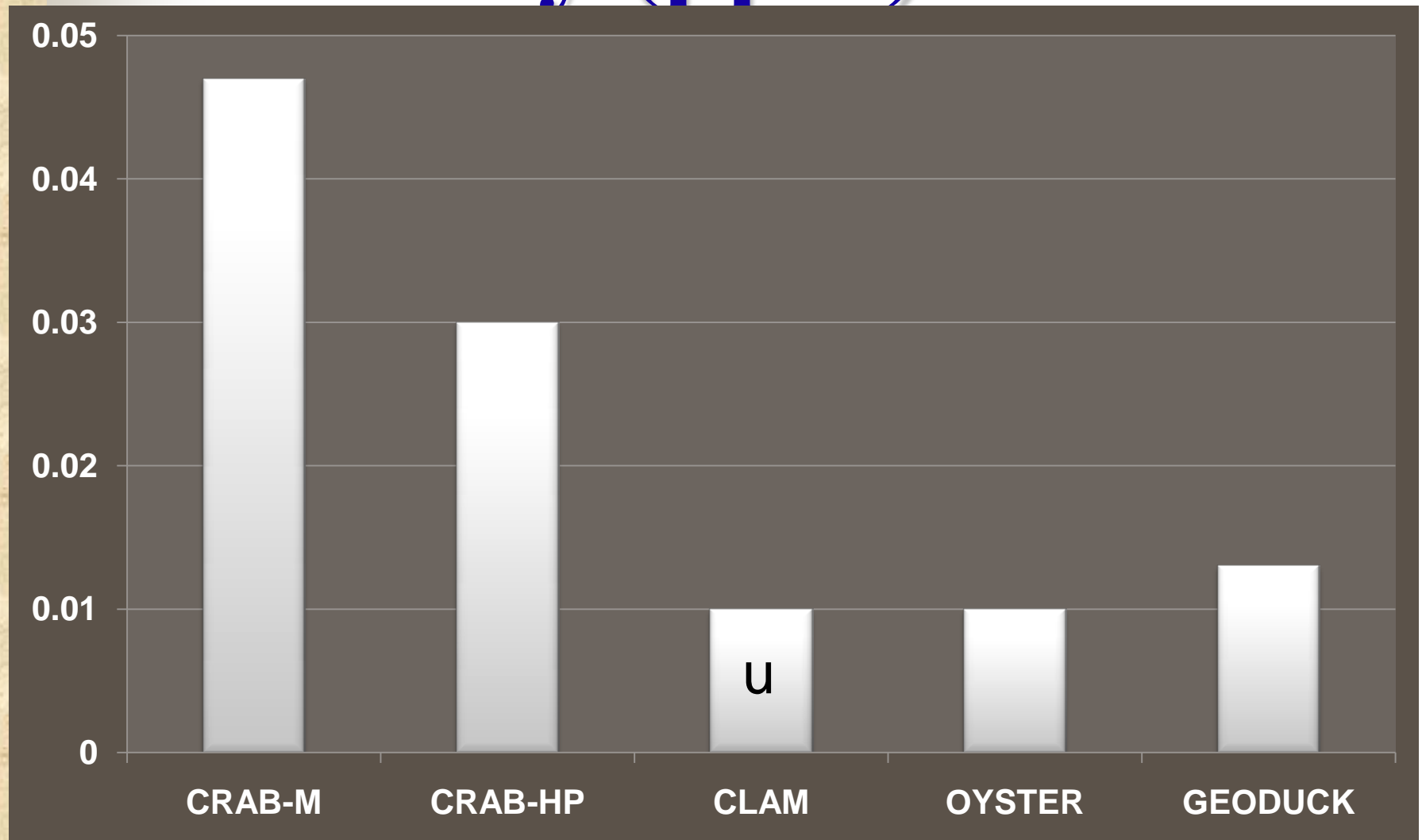
Chromium (ppm)



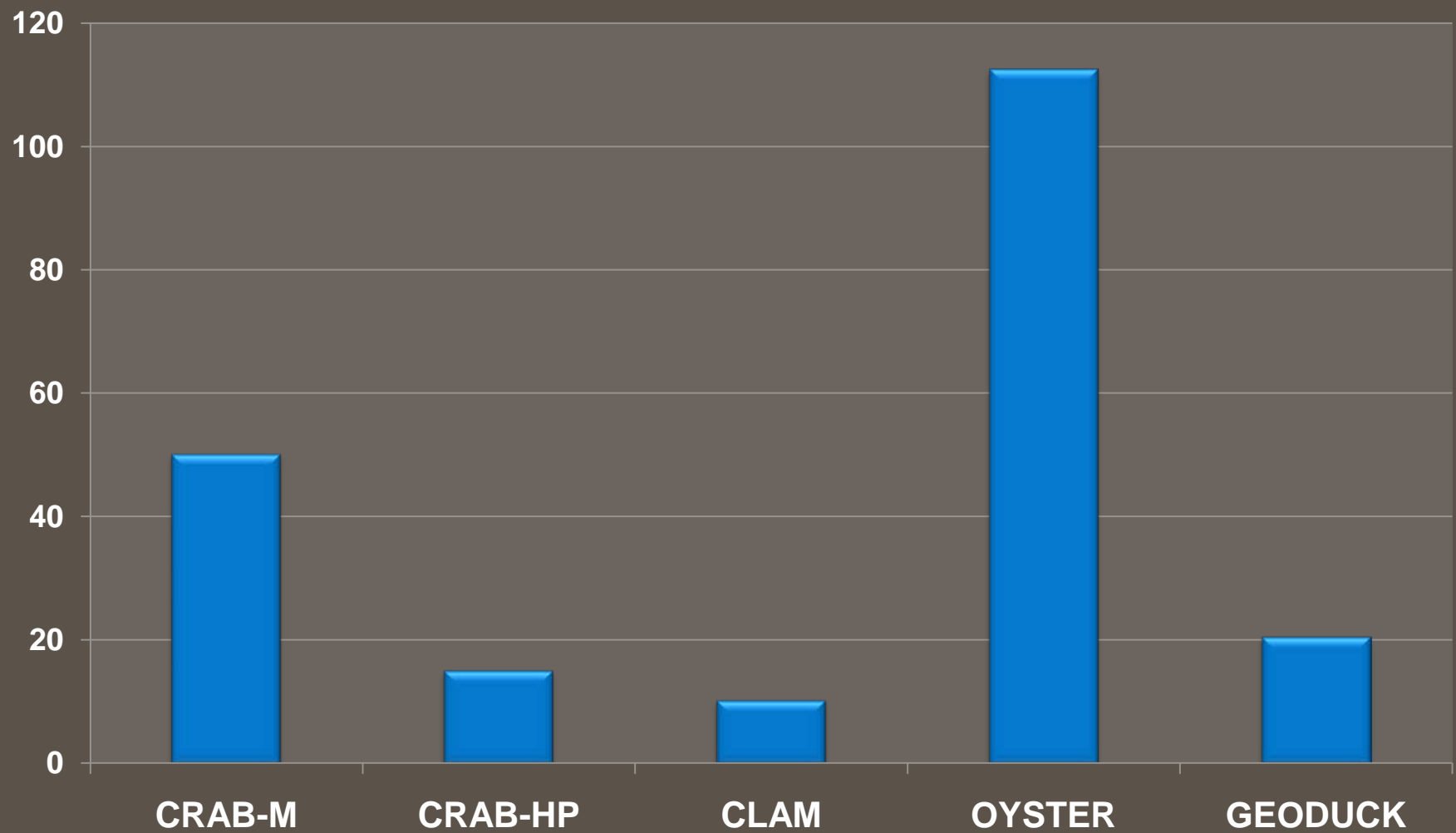
Copper (ppm)



Mercury (ppm)



Zinc (ppm)





Results in Meals/Month Limits for Carcinogenic Risk

- Port Gamble Bay Dungeness Crab 1
 - 5.61 meals per month at 1/100,000 cancer risk
 - 0.67 meals per year at 1/1,000,000 cancer risk (1.8 w/o Ars.)
- Port Gamble Bay Geoduck 1A
 - 0.476 meals per month at 1/100,000 cancer risk
 - 0.072 meals per year at 1/1,000,000 cancer risk (2.07 w/o Ars.)
- Port Gamble Bay Oysters 2A
 - 0.040 meals per month at 1/100,000 cancer risk
 - 0.072 meals per year at 1/1,000,000 cancer risk (0.72 w/o Ars.)
- Port Gamble Bay Clams 2A
 - 0.031 meals per month at 1/100,000 cancer risk
 - 0.0368 meals per year at 1/1,000,000 cancer risk (1.96 w/o Ars.)



Non-Carcinogenic Risk Meal Limits

Chronic (Non-Carcinogenic Risk) Health End Points

- Port Gamble Bay Dungeness Crab 1 (meat)
 - 23.5 meals per month based on Dioxin
 - 19.7 meals per month based on Mercury
- Port Gamble Bay Geoduck 1A
 - 2.82 meals per month based on Arsenic
 - 26.9 meals per month based on Dioxins
- Port Gamble Bay Oysters 2A
 - 2.82 meals per month based on Arsenic
 - 9.78 meals per month based on Cadmium
 - 25.17 meals per month based on Dioxin's
 - 22.71 meals per month based on Zinc
- Port Gamble Bay Clams 2A
 - 1.41 meals per month based on Arsenic
 - 25.51 meals per month based on Dioxin's

Port Gamble Bay's Future

Our Preference, Need and Hope

- Healthy, Sustainable Fisheries Resources
- Open Finfish and Shellfish Fisheries - Seven Generations and Beyond
- Conservation Easements for Shoreline
 - Trust for Public Lands
 - Cascade Land Conservancy
- Conservation Zoned under DNR Aquatic Lands HCP
- Any Housing Developments to Have High-Tec Membrane Treatment
 - No Net Loss or Shellfish Closures from Developments
- DNR Land Trades
- Low Impact Green Developments
- Ecotourism and Tribal Cultural Tours

